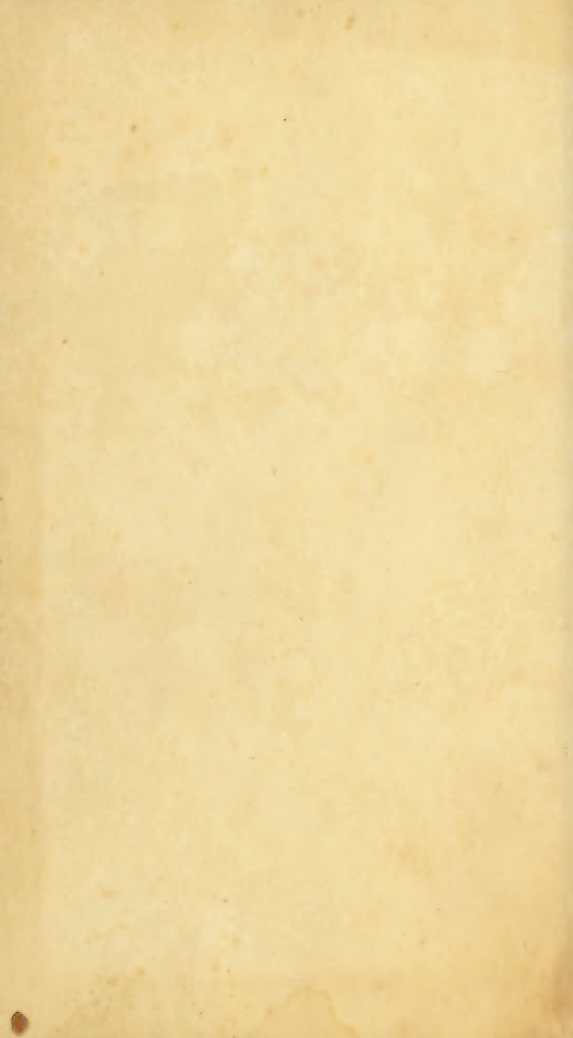










No.

THE
NATURAL PHYSICIAN'S
BOOK OF REMEDIES,
CONTAINING
A PATENT RIGHT
FOR
DOCTORING.

BY JOSEPH BAKER.

SECOND EDITION, IMPROVED AND ENLARGED.

CHILLICOTHE, OHIO:

1832.

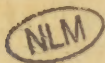
DISTRICT OF OHIO, *To wit:*

BE it remembered, that on the 21st day of May, Anno Domini, 1831, JOSEPH BAKER, of the said district, hath deposited in the office, the title of a book, the title of which is in the words following, to wit:

"The Natural Physician's Book of Remedies, containing a Patent Right for Doctoring. By Joseph Baker.

The right whereof he claims as author, in conformity with an act of Congress, entitled "An Act to amend the several acts respecting Copy Rights."

WILLIAM MINER, *Clerk*
of the District.



J. HOUGH, PRINTER.

INTRODUCTION.

IN writing the following piece, I shall try to comprehend as much as I can with a few words, so as to show the causes of diseases, with the medicine and management, with a few of the outlines of our physical bodies, its organization with the state of the blood under different circumstances; and shall try to be as plain as possible, and avoid repetition. And underneath the pages I shall generally place some philosophical remarks, which is intended to make the reader acquainted with some of the laws of nature, which may be said to be an abridgment of philosophy, that I fancy will be found very interesting to the readers in general. The principal work that I shall depend upon, is NIEL ARNOTT'S *Elements of Physics*—and I am ready to recommend his work as the best of the kind that I know of.

The first and greatest thing with man is the salvation of his soul; as Christ says: "First seek the kingdom of God and all these things shall be added unto you." And next of importance is the health, ease and safety of our bodies, which is every person's business to attend to with prudence and attention. But these two points, especially the first one, are too apt to be neglected and our attention fixed on objects of less importance. While the inferior race of beings seem to have changed as little since the beginning of our records as the trees and herbs of the wood, which give many of them shelter, the condition of man has progressed in a very extraordinary manner. The inferior beings were so formed by their creator, that within one life or generation they should attain to all the perfection of which their nature was susceptible. Their wants were partly provided for; as the cloth-

ing of feathers for the fowls; furs and hair for beasts; scales for fish, and the like. But how different is the case with man; though he comes into the world helpless, his strong intellects, operating with language, are the means which have gradually worked this extraordinary change. By language fathers have communicated their gathered knowledge to their offsprings, and these to succeeding children, with new accumulations; and after many ages the precious store had grown until memory could not retain more. At length the art of writing and also of printing arose, which made language visible and more permanent, and so enlarging the stores of knowledge down to a recent period; and at present man's memory reaches to the beginning of records, whose judgment is searching the treasures of knowledge, and has a faint idea of the vast bounds of creation, which appear to be governed by a few simple laws, which are almost as unchangeable as the giver. The condition of man has thus changed from barbarism, in a good degree, to a state of civilization, which is covering the face of the earth, while each part is becoming interesting to him. Now a man of an ordinary fortune may reflect on what is going on around him, and say, I am settled in a society that affords me conveniences, support and comfort that a king did not enjoy some centuries past. Ships are crossing the ocean in every direction, and brings what is useful to me from all parts of the earth. In China they are digging the mines, as well as in many other places, for me; and my tea comes from China. In general, in the southern parts of America they are raising cotton for me; and sugar is sent here from different parts. In the West India Islands they are raising coffee for me. Silk is made and sent from Italy. Wool and flax are raised, manufactured and

brought here for my clothing. Grain, fruit and meat is raised and brought here for my nourishment from different countries. The postmasters are sending me the news from different parts; and I have officers, rulers, commanders and servants, that are doing business for my advantage. In short, I have roads, wagons, canals, boats, ships, horses, mules, oxen, carts and carriages, that are bringing me the comforts of life from almost all parts of the world, as well as mechanics of every description, making all kinds of machinery, tools and instruments, from a ship down to a pin or needle—all are working to my advantage. The printers are printing books of almost every description for me, as well as sending me the news from all parts. These newspapers and books transport the mind not only to all places, but to all times. Thus has the condition of man progressed from a state of barbarism to this state of society. And now, likely, at this time we are on the eve of many more improvements equally valuable.

If my system of doctoring should prove good, as it has done, our richest parts of the country, which a number of people have deserted on account of the fevers, will re-people again with fresh zeal and courage; and this disease will be looked at as a temporary disease that is not fatal, though it has long been the common scourge of the country, and has peopled the grave-yard faster than any other disease. Rheumatism, croups and pleurisies will generally be viewed in the same light. And if the steam wagon should travel from thirty to fifty miles an hour it will make a distant country seem near at home. This would be something like one thousand miles in a day and night. This would make a great difference in business, when a man may fill his office in a city several hundred miles from home; when the

news, goods, and, if required, armies can travel with such rapidity. Such being the improvements, all persons that have sufficient money to purchase what they need, can have nearly, if not more comfort, than if they possessed the whole, which would burden them with trouble. The improvements of man is not generally made by craft, but by applying the means connected with memory and judgment, and is the result often of many experiments, though it is sometimes by accident found out; but in some of the most useful discoveries divine Providence guides man's feelings to the very place where the discovery is made—the bible gives us many instances of like circumstances; such has been the impressions of my mind a number of years past. I thought first of publishing a book on this subject to sell as another book; but after some reflection, I found that the law only encouraged the medical societies; and that the system must be sanctioned by the Legislature of the State or by the Patent Office, that it might be according to law. I felt conscious that it was my duty to disclose my views and bring them before the public, in that way that the system might pass; and many serious reflections on the subject have impressed me, that I am at a loss for language to express. One was, I feared my mind might get off the subject of religion, and get over-stocked with this world and its objects; and I looked for a stronger opposition from other physicians than that I have met with;—and about two or three years past I took a more particular view of the subject, while I reflected on my present circumstances, while my reasons told me that I could live the balance of my days in a degree of peace, and this new system would involve me in difficulty, and the residue of my days would be trouble. God bears me witness that I had a great

measure as well as choice, to have nothing to do with the business, but impressions of mind as well as consciousness, crowded me forward in my duty. God has commonly made use of man to bring his purposes about; and his means have often been overlooked by the popular class of mankind; they are like young hunters who generally over shoot. Such things have been in every age of the world. Another very involving question has been presented to me, which has occupied my mind very seriously—whether it is right or not, to have such a price for *Rights*?—This question has been discussed among different classes of people, both religious and irreligious. The nature of the case has been explained to them consistent with popular customs, that if the price was reduced it would become unpopular; but the price was first set by disinterested men, and is now set by the Natural Physician society, and I expect to be governed by them.

In the first stage of education, viz: during the years of childhood, the learning acquired is necessarily of the most mixed kind, and is determined by what is called accident; but every person may be said to begin his education or acquisition of knowledge, on the day of his birth. Certain objects repeatedly presented to the child, are, after a time, recognized and distinguished. The number of objects thus known, gradually increase, and from the constitution of the human mind they are soon associated in the recollection according to their resemblances, or obvious relations. Thus, sweet meats, toys, articles of dress, &c. soon form distinct classes in the memory. At a later age, but still very early, the child distinguishes readily between a stone or mineral mass, a vegetable and an animal, and thus his mind has already noted the three classes of natural bodies, and has acquired

a certain degree of acquaintance with natural history. He also soon understands the phrases, a falling body, and the force of a moving body, and has, therefore, a perception of the great physical laws of gravity, and stubbornness. Having seen sugar dissolved in water, and wax melted round the wick of a burning candle, he has learned some phenomena of chemistry. And having observed the conduct of the domestic animals and of persons about him, he has begun his acquaintance with physiology, and the science of mind. Lastly, when he has learned to count, and judge of the division of a cake or sugar plumb between himself and his brother, he has advanced into arithmetic. Thus, within a short time, a child of common sense has made a degree of progress in the great departments of human science: and in addition has learned to name objects, and to express feelings by the sound of language. Such, then, is the beginning or foundation of knowledge, on which future years of experience or methodical science, must rear the structure to a more liberal education. Mathematics are at present generally made the beginning of the study; and the reason assigned is, that scarcely any object in physics, chemistry, or organic life, can be described without referring to quantity or proportion, and therefore without using mathematical terms. Now, this is true; but it is equally true that the knowledge acquired by children in common schools, is sufficient to enable them to understand all the great laws of nature, nearly as well as the knowledge of language obtained at the same time, is sufficient without any study of abstract grammar, to enable him to converse on all common subjects sufficiently plain to be understood. But one mistake that exists among us is, learning children with only the one sense of seeing.

ing is crowded more than the sense of feeling; therefore it is found that the fastest way of learning is to write it down or mark it out with the hand or foot: so that several of our senses may be engaged at the same time.

Thus it is discovered, that in learning a song or any thing that we wish to learn by heart, once sounding it out, is as good as ten times looking over it with our eyes; and once writing it is as good as five times sounding it out. And we suppose the day is not far distant when the child will be taught first to write his alphabets, and then put them together in syllables with his pen, and then put them in order for reading with the same instrument; and at times sound it out, so as to prepare the person to do business in the midst of a throng or multitude of people without disturbance. The notions on education prevalent in the world, until very recently, have been as erroneous with respect to the comparative importance of different branches of knowledge, as with respect to the order of study. Thus at many of our famed schools, and even universities, the attention has been directed almost solely either to Languages and Logic, or to Abstract Mathematics, the preceptors seeming to forget that these objects have no value but in their application to physics, chemistry, life and mind. "The reason for bestowing much attention on the Greek and Roman languages, was good some centuries ago, because then no book of value existed which was not written in one of these languages; but now the case is completely reversed, for he who learns almost any matter of science from old books, is learning error, or at least knowledge far short of modern erudition. As to the higher mathematics—again, while they merit great honor

as being the instruments by which many useful discoveries have been made, and the conjectures of powerful minds have been confirmed, still a very deep investigation of them is neither possible to every man—nor, if it was so, would it be of any utility. The mode of proceeding, to which we have now alluded, is as just, as if a man to whom permission were given to enter and possess a magnificent garden, on conditions of his procuring a key to open the gate, and measures of all kinds to estimate the riches contained within, should waste his whole life on the road in polishing one key, or in procuring several of different materials and workmanship, and in preparing a multiplicity of unnecessary measures,” as the apostle says, “ever learning and never able to come to the knowledge of the truth.” Even religion itself, in various ages and countries, has felt the influence of the state of the mind as to solid attainments of the knowledge of nature, which we can easily possess. So the enlightened christian minister may earnestly recommend the study of nature, because, from contemplating the beauty of creation, discover the wisdom and benevolent design manifest in all its parts. Thence there springs up in every undepraved mind, those feelings of delight and gratitude which constitute the adoration, in part, that is due to the maker—and which forms a fit foundation for the sublime doctrine of immortality. And secondly, because a revelation must be proved by miracles; to enable men to distinguish between miracles and the usual course of nature, a perfect knowledge of that course, or of natural philosophy, is essential. All the false religions that are in the world were formed and upheld by pretended miracles. We have good reason to suppose that the worship of Diana at Ephesus, was for want of a proper knowl-

edge of nature, They had advanced in knowledge far enough to know, that the planet Jupiter was a great deal larger than this globe; therefore they thought that the God of nature resided there. For reasons like this, the apostle spoke against philosophy, for there were no philosophers till Julius Cæsar, that could be depended upon; and therefore they were called vain. And even in my early part of life I was taught that philosophy contradicted the bible, and by no means agreed with it; and the evidence that was brought, was, where God commanded the sun to stand still—and philosophers say that the earth moves, and the sun stands still; but it is evident that God speaks to our comprehension. The people would not have understood what the Lord intended, if he had said the earth shall now stop rolling for a short time, as these things had not yet been known. Other passages teach us, that God is angry with the wicked, when no more is intended than that his holy nature is opposed to sin. But let us compare modern philosophy with the gospel, and we will find that they agree, in substance, nearer than any other two systems now on earth. The genuine philosopher does not believe in effect without a cause, though he may not see the cause, he reasonably supposes that there is one; and such circumstances as that of the sun standing still, or the three Hebrew children in the fiery furnace, or the sun darkened when Christ suffered, with many others that could not have taken place according to the laws of nature, stands as pillars of his faith, that nothing but a supernatural cause could have effected them. Two of the laws of nature are *Attraction* and *Repulsion*—These laws of nature may be divided as follows 1st, Physical; 2nd, Chemical; 3d, Vital; 4th, Mental. A knowledge of these and similar laws, constitutes

the branch called Natural Philosophy, of which physics is the base. Now, as man cannot, short of a supernatural revelation, learn any thing but what respects first the momentary state, past or present of himself, and the objects around him. While men were examining the forms and qualities of the bodies around them, they could not avoid noticing, also, the motions or changes going on among them, and they discovered resemblances among them; and a careful classification at this day being the result of countless observations, with experiments made through a series of years and generations, we are enabled to say, that all the motions and changes, which are constant and regular, in general, as where they produce the return of day and night. And as man by his books discovers how these changes have been going on for three thousand years past, and observes how they go on at present, so he discovers that there is a regularity among them. History and Science, in this sense, makes up the whole sum of his knowledge of nature. But we have already said that physics is the base; as Dr. Arnott says—"The laws of physics govern every phenomena of nature in which there is any sensible change of place, being alone concerned in the greater part of all the phenomena, and regulating the rest, which originates from chemical actions, and forms the actions of life." The great physical truths are now reduced to four, and are referred to by the words Atom, Attraction, Repulsion and Inertia," or stubbornness. It gives an astonishing but true idea, of the nature and importance of methodical science, to be told that a man who understands these words, viz: how the atoms of matter, by mutual attraction, approaches and clings together, to form masses which are solid liquids, or airy-form, according to the quantity of heat among

them; and which, owing to their inertia or stubbornness, gain or lose motion, in exact proportion to the force of attraction or repulsion acting on them, understands the greater part of the phenomena of nature. But such is the fact, solid bodies, existing in conformity with these, exhibit all the phenomena of Mechanics; Liquids, those of Hydrostatics and Hydraulics; Airs, those of Pneumatics; as Dr. A. says—"Had there been only one kind of substance or matter in the universe, the laws of physic would have explained all the phenomena; but there are iron, sulphur, charcoal, and about fifty others, which, to the present state of science, appear essentially distinct. Now, these, when taken singly, obey the laws of physics; but when placed in contact, under certain circumstances, they exhibit a new order of things. Iron and sulphur, for instance, brought together and heated, disappear as individuals, and unite into a new yellow metallic mass; which, in most of its properties, is not like either iron or sulphur; under other new circumstances, the two substances will again separate and assume their original forms. Such changes are called chemical, from the Arabic word, signifying to burn."

Then, to pursue this subject, I shall speak of the law of gravity or attraction. First, it has been observed, that things when raised from the earth, and left unsupported, falls toward it; it was supposed that things had weight, but there are exceptions in such matters; for it is found that some are heavier than others. Second, it was discovered that this globe of earth is surrounded by an ocean of air, having nearly fifty miles of altitude or depth, of which a cubit foot taken near the surface of the earth, weighs about an ounce; it was then perceived that flames, smoke, vapour, &c. rose in the air only as oil rises in wa-

ter, viz: because lighter than the fluid by which they are surrounded. Third, it was found that bodies floating in water, near to each other, approached, and freely cohered together; and that any bodies hanging by each other, are drawn by the same power towards each other, so as not to hang quite perpendicular; and that a plummet suspended near a hill is drawn towards the hill with a force so much less than the weight of the plummet, as the hill is smaller than the whole earth. It is thus proved that weight itself is only an instance of a more general mutual attraction, operating between all the constituent elements of this globe; and which explains, besides, the fact of roundness of the globe, all the parts being drawn together towards a common centre; as also the form of dew drops, rain drops, or drops of mercury, as well as melted metal, gather into round substances. Fourth, and it was further observed, that all the heavenly bodies are round, and must, therefore, consist of materials obeying the same laws. And lastly, that these bodies, however distant, attract each other, for that the tides of our ocean rise in obedience to the attraction of the moon, and the spring tides is when the sun and moon are in the same direction. It has been observed that the power of attraction was manifest in connecting the heavenly bodies together.

The next I shall mention is that of Repulsion, which is effected mostly by heat; that flames, smoke, vapour, &c. rise out from this earth, commonly, as the effect of heat, while other objects explode like that of gunpowder, and throws out from this common centre. We may discover it in volcanoes, or where either water, wind or fire is confined and pressed, it will explode.

The next division we mention are those of Physic.

cal, Chemical, Vital and Mental, to give the definition of the words. What I understand by the word Physical, is, one body affecting another, whether the substance be inside or outside, or at a distance off, it makes no difference; the moon is thought to have a physical power on the earth, though it is a great distance from us. The word Chemical are substances being changed by going through certain processes of heat. Vital is all that has life. What I understand by the word Mental, is, the reasoning power or judgment.

But I have learned enough to perceive, that the great universe is as simple and harmonious, as it is immense; and that the Creator, instead of interposing separately or miraculously, to produce the different effects that take place, has willed that all should proceed according to a few general laws. There is nothing in nature so truly miraculous, and demands adoration, as that the endless results which we see should spring from a few simple laws. In times of ignorance men regarded every occurrence which they did not understand, as arising from a direct interference of a supreme power. For many ages, and among some nations still, eclipses, earthquakes, and many diseases of the body, as well as thunders, were or are accounted miraculous; hence arose among them many ceremonies, and sometimes even barbarous sacrifices to appease their offended deities; and was no more reasonable than if we should pray for the day or night to be shorter than it is. They had not a proper perception of God, who made the sun to rule the day; who said to the water, 'hitherto thou shalt come and no farther;' who gave nature permanent laws—laws that appear, in a degree, as unchangeable as the giver—and allows men to discover them, for the direction of their conduct in life—

"laws so unchangeable, that eclipses may be calculated backward or forward, for thousands of years, without erring any of notice; and as our knowledge of nature advances, we can explain other events with equal precision."

Life is the most complicated state in which matter exists, for under the influence of life it forms bodies with an internal structure of tubes and cavities, in which fluids move, producing changes continually. These bodies are called organized bodies, because of the various organs and parts they possess; they may be divided into two classes, viz: the animals, which are endowed with the power of locomotion or self motion; and vegetables, which are fixed to the soil.

THE PHILOSOPHY OF THE BLOOD.

I firmly believe that "the blood is the life;" first, because it is a bible doctrine, Genesis ix, 4 and 5, with many other passages equally plain; secondly, because it agrees with the fluids that circulate in man and beast, as well as fish, fowl and insect; thirdly, because it corresponds with the fluid substance that circulates in the herbage and inanimate parts of creation. If this is admitted, the first thing to notice is, the circulation of the blood.

Dr. Arnott says:—"Perhaps there are few points more remarkable, in the history of the progress by which man has arrived at his present knowledge of the universe, than that it is only two hundred years since he discovered that the blood in his own, and in other animal bodies, is constantly circulating. England claims, as one of her sons, the man whose powerful intellect at last established this truth, in opposition to strong appearances, and to the most fixed prejudices. Dr. Harvey published his proofs in the year 1619. A person who tries to imagine what the science or knowledge of medicine could have been, while it took no account of this fact, on which, as a basis, all certain reasoning about the phenomena of life must rest, is prepared for what old medical books exhibit of the writings of human reason, in attempts to explain and to form theories, while a fatal error was mixed with every supposition. The chief circumstance which prevented the earlier discovery of the circulation was, that on examining dead bodies the arteries were always found empty of blood, which was the reason, also, of these vessels being called arteries or air-tubes.

"We now know that as the Thames water spreads

over London, in pipes, to supply the inhabitants generally, and to supply the particular purposes of brewers, bakers, tanners and others, and is then in great part returned to where the current sweeps away the impurities—so nearly in the human body does the blood spread from the centre through the arteries to nourish all the parts, and to supply material of secretion, or the parts that divide the fluids to the liver, the kidneys, the stomach, and other viscera, or thick substances; and, after supplying the gaul, returns from these by the veins, towards the heart and lungs, to be purified, and to have its wastes replenished, that it may again renew its course.

“The circulation may be more particularly described thus: From the left chamber or ventricle of the heart, a strong muscular mass from the heart, a large tube arises, called the aorta, or big artery, and by a continued division or ramification, opens a way for the bright scarlet blood to even the minutest part of the living frame—the extreme divisions or twigs being so small that they are called capillary or hair like tubes. At the termination of these vessels, the blood after answering the purpose of nutrition, &c., by which it loses its bright color, enters the commencements of the venous tree, or returning channel, and gliding successively from smaller to greater branches, returns towards the right chamber or ventricle of the heart, requiring purification and partial renewal.—Considering the great arterial and venous systems of the body, as twin trees—the scarlet and the purple, with corresponding and meeting branches, and with trunks will touch each other at the heart, it will appear that they again completely meet or inosculate, or commune with each other, by their extreme roots, and thus form a continued or circular channel, The

root of the venous tree, by which the blood spreads from the right chamber of the heart to the lungs, is called the pulmonary artery; and that of the arterial tree, by which the blood returns to the left chamber, is called the pulmonary vein. Both of these ramify in the spongy masses of the lungs, forming a great part of the pulmonary substance. Fresh materials for the blood is brought from the digestive organs, by the lacteal, or small organs, absorbents or thoracic duct, and is constantly pouring into a large vein near the heart, to be completely mixed with the dark or returning blood. By a violent agitation or churning during its passage through the heart, the mixture, on leaving the right ventricle, is strained through the minute ramifications of the vessels in the lungs, and at the same time is exposed to the action of the air entering the cells of the lungs in respiration, by which exposure the dark purple blood becomes again pure scarlet; and when it reaches the left chamber, or ventricle, is ready to set out on its journey as before, charged with new life and nourishment. The two chambers, or ventricles, of the heart, have each an anti chamber or auricle, (so called from an external resemblance to a dog's ear) into which the blood is first received from the veins, and there are valvular doors between the auricle and ventricle, which allow the blood to pass readily into the ventricle, but oppose its return during the ventricle contraction. Similarly acting valves are placed between the ventricles and great arteries. There are valves, also, in many of the veins over the body, to secure the natural course of the circulation. Besides the important change or purification which the blood undergoes in passing through the lungs, its composition is much influenced by the action of the kidney, of the discharges of the skin, and of the liver, &c.

The fact of the circulation of the blood being once admitted, an inquirer, who contemplates the apparatus by which it is effected, is led, by the general analogies of nature, to conceive, first, that the ventricle of the heart, at each contraction, empties itself into the great artery; second, that the consequent jet causes a wave to pass along to the extremities of the arterial tree, accounted, simply, elastic, so as to produce, every where, what is called the pulse; third, that the force of the heart, acting along the arteries, forces the blood through their open capillary extremities, into the commencing veins, and along the veins back to the heart again. Now these suppositions which Harvey believed, completely to describe the circulation, are all nearly true; but the following facts, and others, ascertained since Harvey's day, not exactly squaring with them, have rendered farther investigation necessary: First—The pulse, instead of being a distinctly progressive wave, is almost as instantaneous over the whole body as a shock of electricity. Second—The arteries are all found empty after death; and if an artery be tied in the living body, the part beyond the ligature, although the action of the heart cannot reach it, is soon emptied through the capillaries into the veins. Third—Although the rapidity of the blood's passage through the capillaries varies very much, it does not vary in exact accordance with the changes in the rapidity or force of the heart's action. In analyzing this subject, it is convenient to follow the blood round from the heart to the heart again, through the three stages of 1st the arteries, 2d the capillaries, 3d the veins.

Arteries examined after death are found to consist of, 1st, an out coat of strong elastic substance; 2d, a middle coat of circular fibrous; and 3d, an inner coat of smooth lining membrane. Their elasticity or

power of resisting change of situation, and of returning to a middle state from either dilation or compression; because remaining in the dead artery, was the most obvious property, and was that first attended to. Minute observation of the phenomena of life, has since determined the following facts, proving and illustrating a contractility resident in the fibrous coats.

1st. "A small living artery cut across soon contracts so as to close its canal, and arrest hemorrhage or bleeding.

2nd. "While an animal is bleeding to death, the arteries, accommodating themselves to the decreasing quantity of blood, contract far beyond the degree to which their simple elasticity would carry them, and they relax again after death. Dr. Hales took seventeen quarts of blood from a horse before it died, in whose body only three quarts more were found altogether, and yet the moment before death the force of the blood in the arteries sustained a column of two feet in his experimental tube.

3d. "The artery of a living animal, if exposed by dissection to the air, sometimes will contract in a few minutes to a great degree; and in such a case only a single fibre of the artery may be effected, narrowing the channel like a thread tied round it.

4th. "When a living artery is tied, the part between the ligature and the nearest branch on the side of the heart gradually contracts, and becomes a solid or impervious cord.

"Although these facts prove indubitably a contractility in the coats of arteries distinct from their elasticity, still because the circular fibres do not resemble common muscles in color or in chemical composition, or in being immediately obedient to the stimuli of electricity, pricking, great heat, &c."

One great mistake among doctors has taken its

rise from their experiments on dead bodies, as the fluid don't act in them like the fluids in the living. The pores can scarcely be opened, and when opened do not discharge like the living, nor no other discharge will act in the same position as in the living; therefore these experiments, without particular attention is paid, will blind a person instead of communicating light, or real knowledge, though they may do both.

"The passage of the blood through the capillaries.—We have seen that the heart keeps up a tension or pressure, in the arteries, of about four pound on the square inch of their surface, and with this force thus propelling the blood into the capillaries. If these last were passive tubes, constantly open, such force would be sufficient to press the blood through them with a certain uniform velocity; but they are vessels of great and varying activity. It is among them that the nutrition of the different textures of the body takes place, as of muscle, bone, membrane, &c. and that all the secretions from the blood are performed as of bile, gastric juice, or saliva; and to perform such varied and often fluctuating offices, they require to be able to control in all ways, the motion of the blood passing through them. The capillaries of the cheek under the influence of shame, dilate instantly, and admit more blood, producing what is called a blush; under the influence of fear they suddenly empty themselves, and the countenance becomes pallid; tears or saliva gush in a moment, and in a short time are again dried up. If a person having inflammation in one hand, be bled from corresponding veins in both arms at the same time, twice or thrice as much blood will flow from the diseased side as from the other. Similar changes occur in many other instances. Now, the only mechanical action of vessels capable of causing these

phenomena, must occur in contractile or muscular coats, and with reference to such action it merits notice, that arterial branches have always more of the fibrous or contractile coats, in proportion as they are smaller.

"The action of the capillaries, is the cause of that singular phenomenon which prevented the ancients from discovering the circulation of the blood, viz: the empty state of the arteries after death.

"All muscular parts on animal, including, therefore, the contractile coats of vessels retain life, or power of contracting, for a considerable time after respiration has ceased, as is seen in the recovering of persons apparently drowned or suffocated—in the leaping of a heart taken from an animal just killed—in the actions resembling life, which can be produced by the agency of galvanism in a body recently dead. But the fact is seen still more aptly for our purpose, in the total disappearance of a local inflammation after the death of the patient; for inflammation involves a gorging or over distension of the capillaries, into which, when the heart has ceased to press blood, the contractile force remaining in them even under disease and in a dead animal, is sufficient to squeeze the blood out of them, and often to remove all trace of the malady which has killed. In ordinary cases, then, the capillaries throughout the body remain alive and active for a considerable time after breathing has ceased, working like innumerable little pumps, and emptying the arteries into the veins. As the red blood is their proper sustenance, as well as stimulus, they work as long as there is any of it coming from the arteries behind them, except, however, the capillaries of the lungs, which soon cease to act,—because after breathing has ceased, they are filled with black blood; and are, moreover compressed by the collapse of the chest, and all the blood ac-

cumulates behind them. The capillaries may continue to be filled from the arteries, either in consequence of their elasticity opening them with what is called a suction power, or of an absorbent power, dependent on life, like that of the lacteals, or them that convey chyle from the stomach into the blood; and of the absorbents all over the body, and perhaps of the vessels in the roots of vegetables. When death is produced by lightning, or by poisons which destroy all motions of life instantly, the arteries, after death, are found to contain blood like the veins in a living body. If an artery be tied, the part beyond the ligature is soon emptied into the veins, and becomes flat. The experiment has been made upon the aorta itself, or the great artery, which rises immediately out of the left ventricle of the heart."

Passage of the blood through the veins.—"The veins have much thinner coats than the arteries, and if taken altogether, have greater capacity, because they exist, in many situations, as double sets, an exterior and an interior; they have, also, very frequent anastomoses, or communications, with each other throughout their whole course.

"The simple weight of the column of blood, in any descending artery, is just sufficient to raise the blood thro' open capillaries to an equal height in the corresponding vein, according to the hydrostatical law, that fluids attain the same level in all communicating vessels; and, therefore, as the arch of the aorta rises considerably above the heart, the pressure of the descending arterial column of blood would be sufficient to lift that in the veins not only up to the heart, but considerably beyond it. In addition to this influence of gravity on the venous current, the blood is pressing into the arteries, and from them, therefore, towards the veins with a force from the heart itself, as is stated, of about four pounds to

the square inch; or, in other words, as if there were a column of blood eight feet higher than the heart, urging the current, it might be expected from the law of equal diffusion of pressure in fluids, that these causes would soon produce pressure in the veins as great as in the arteries. This does not happen, however, because the blood has a ready escape from the veins through the right ventricle of the heart under ordinary circumstances. There can be no greater tension in the veins, than just enough to lift the blood to the heart, and to overcome the friction; just as in an upright leather tube, open at the top, and receiving water from a powerful forcing pump, through a small opening at its bottom. There is not often a greater tension, or pressure, than what corresponds to the height of a fluid column in the tube, and to the friction between the fluid and tube. In Dr. Hale's experiments, already alluded to, a tube connected with a vein, so as to receive its blood, becomes filled with blood to a height only of about six inches above the level of the heart. As Dr. H. generally cut the vein completely across, and inserted the tube into the portion leading from the capillaries, he would have discovered the whole power with which the blood is pressed along the veins from the capillaries, but for the free communication of veins with each other which reduces the tension even in an obstructed branch, to the degree existing in the system generally, when from agitation of the animal or any straining exertion, the passage of the blood into the heart was impeded, all the veins became tense, and a tube inserted into the returning jugular had blood running over, at a height of three feet above the heart.

If the blood did not escape from the veins, as above described, the only cause which could pre-

vent the venous tension from becoming as great as the artereal, would be obstruction in the capillaries; but the following facts and considerations prove, that these vessels which, in the dead body, allow the passage of blood,—“1st, Magendie laid bare the chief artery and vein of a living limb, and detached them at the part from the flesh underneath, so that he could apply a tight bandage round the limb without including them, and could thus render them the only channels of circulation for the lower limbs. He then found, that when a separate ligature was put upon the vein to prevent the return of its blood to the heart, and a puncture was made beyond the ligature, the flux of blood from the puncture was rapid or slow, according as the heart was allowed to produce a greater or less degree of tension in the artery; this tension was regulated by compressing the artery between the fingers. 2d—After a similar preparation of the parts, the blood will ascend in a tube from the obstructed vein, very nearly as high as from the artery. 3d—In the common operation of bleeding, when the vein is first punctured, it often jets from it as from the artery, straining the top of a lofty bedstead. 4th—The microscope discovers in the capillaries a uniform forward motion of the blood, as if it were obeying the steady pressure of the arterial tension, and not any intermitting action. 5th—Disturbed action of the heart by obstructing the passage of the blood through it, is very soon attended with a tumefaction or swelling of all the veins leading to the heart; the swelling becomes very visible about the neck, head, and in the liver, produces swelling and acute pain. 6th—That perfectly open capillaries of the size, existing in the living body, should just regulate a flow of blood, urged by the usual arterial pressure in the degree which really occurs.

temperates the flow to a proper medium; in ordinary cases; therefore, they must be open and regular, because near all the divisions of the fluids takes place among them;" that of perspiration, joint, water, marrow, &c.; the division for urine is in the artery and kidneys. These things prove that if the capillaries were open, and the communications of the veins shut, that there would be a pressure of blood in the veins, near as high as in the arteries. So little has this important truth been understood, that, in the elementary works lately published, the venous current is treated of as a very obscure subject; the difficulty seems to have arisen from the great disparity observed between the pressure in the arteries, and in the veins, while the reflection did not occur that it was owing to there being a free passage, or outlet, from the veins through the heart, and a communication of the veins. Veins are much weaker than that of the arteries. We may mention the fact, that if any vein in the living body is made to communicate directly with an artery, it soon swells to bursting; the veins possesses power as well as the arteries, to a great extent of adopting themselves to the varying quantity of blood. The arterial pressure of four pounds to the square inch, supporting in a tube connected with the arteries, a "column of blood eight feet high is produced by the action of the heart—but as the heart, while injecting the blood against this resistance, has, moreover, to overcome the stubbornness both of the quantity injected, and of the mass in the great artery; all is moved by injections, and the spring of the vessels yielding to momentary increase of pressure; therefore the heart acts with a force of near six pounds on the inch. Now as the left ventricle of the human heart, when distended, has about ten square inches of internal surface, the

whole force exerted by it may be near sixty pounds."

This has been much overrated. "1st—By assuming that the ventricles of the heart are completely filled and emptied at each pulsation—an assumption disproved by inspection of the exposed heart of a living body, and the fact of the valves between the auricles and ventricles, not closing so perfectly as to prevent returning. 2nd—By supposing the issue of blood from a wounded artery, or vein, to be the measure of the usual velocity. Now it would be as reasonable to suppose the issue of water from a wounded pipe, connected with any reservoir, to be the measure of a continued current in that pipe, although, in truth, the issue would be the same, even if the water in the pipe were usually at rest. 3d—By supposing the frequency of the pulse to be a measure. Now we know, that in diseases of debility, and in animals bleeding to death, the pulse usually becomes more frequent as it becomes more feeble, and as there is less blood moving. 4th and lastly—By supposing the strength of the pulse to be the measure. Now we find that the pulse in an artery just tied, and where, consequently, there is no forward current at all, is scarcely weaker than in an open artery. The common fact of a person's feet remaining stone cold for hours, although the arteries leading to them pulsate nearly as usual, is a proof that exceedingly little blood is passing through the capillaries at the time, and that the pulse, therefore, is no measure of its speed."

"The ventricles of the heart appear, under common circumstances, to throw out about an ounce and a half of blood at every contraction—or about seven pounds per minute. Now if the body contains about twenty pounds altogether, as seems to be the case, the whole would circulate twenty times in an hour:

this would give an average velocity of about eight inches per second, in the aorta, but gradually less in the smaller arteries, because, whenever a vascular channel subdivides the branches taken collectively, they have considerably greater area than the trunk from which they arise, and the current diminishes in a corresponding proportion,—just as the speed of a river stream, is always less in the parts which are deeper and broader. The velocity in the extreme capillaries is often found to be less than one inch per minute; in the veins, the blood must move more slowly than in corresponding arteries, in proportion as the veins are more capacious than the arteries.”

On the Pulse—“It is thought that the motion of the heart is transmitted through the fluid blood, somewhat as sounds are transmitted through bodies generally; or as a blow struck on one end of a log of wood, is felt distinctly by a hand applied to the other, although there be no visible motion in the log. It has been shown that a sudden rush forward of the blood in the artery, such as might be produced by injections at one end of a rigid tube, would be felt by a finger applied, quite as distinctly as a swelling; and it has been deemed this occurrence to be one cause of the pulse, instead of the pulse being progressive from the heart. It is some like a stroke of electricity which shocks the system all over near at once, yet the pulse is the beating of the artery. Every time the heart contracts, a portion of blood is forced into the arteries which dilate, or swell, to let it pass, and then immediately regain their former size. until, by a second stroke of the same organ, a fresh column of blood is pushed through them, when a similar action is repeated. The swelling and contracting of the arteries then constitutes the pulse, and consequently it may be found in every part of the body, where these

vessels run near enough to the surface to be felt; physicians look for it at the wrist, for convenience. The strength and velocity of the pulse, varies much in different persons, even in a state of perfect health. It is much quicker in children than in older persons; in old people it grows more slow and feeble, owing to the decreased energy of the heart; and is low sometimes in stagnations of blood. The pulse is increased both in strength and activity by running, walking, riding and jumping, by eating or drinking things that are warm, by singing and joy, &c. They are diminished in like manner, by fear, want of nourishment, melancholy, excessive evacuations, or whatever tends to debilitate the system. In feeling the pulse, then, in sick persons, allowance should be made for these causes; or what is better, we should wait until their temporary effects have ceased. A hard corded pulse is that in which the artery feels like the string of a violin, or a piece of tightened cat-gut, giving considerable resistance to the pressure of the finger. The soft and intermitting pulse are easily known by their names. In cases of extreme debility, or on the approach of death, and in some diseases it vibrates under the finger, like a thread. In feeling the pulse, three or four fingers should be laid on it at once; the most convenient spot to do this is the wrist, but it can be readily done in the temple just before and close to the ear, in the bend of the arm, at the under part of the lower end of the thigh, among the ham strings, and on the foot. When the pulse trembles, we may judge that there are obstructions in the system; and also when they make a double motion.

A MORE SIMPLE DESCRIPTION OF THE CIRCULATION OF THE BLOOD.

I shall set it down for granted that the blood is the life. If this is admitted, the first thing that follows is, the formation and revolution of the blood. The blood flows from the heart through the medium of the arteries, which in common is near the bones, to the extreme parts of the body, and absorbs in the flesh as it passes out, and the veins gather it and direct it to the heart again: thus, when we bleed a person, we tie round the limb only tight enough to stop the vein—but if we tie tight enough to stop the artery, we will get but little blood. There is a great quantity of water that passes through the canals of the stomach, and is thrown into the blood in an ordinary state of health; and a part of this water passes off by urine, and another part passes through the pores of the body. This is the most critical discharge of any, and there ought to be more attention paid to it than is. Here we notice that there is no singular channel through which the water passes from the stomach, but soaks through the intestines through small pores, and is united with the mass of the blood; the great means of health is to keep the blood, which is the life, pure, which is made up of every substance which is thrown into the stomach. This may convince us of the impropriety of poisonous medicines, which of course forms a part of that blood that is the life and animates the system. The Thompsonian system, that says heat is life and cold is death, is without foundation—If this was true, put a person in the fire and they would be sure to live. But it is

true that life requires a certain proportion of heat, and sometimes more than we are aware of; and it equally leans on the other elements, the water, air and earth, without which it would be impossible to live. It is evident that extreme heat will destroy life sooner than extreme cold. The arguments in favor of either air or water has as much ground to stand on as Samuel Thomson; but the four elements in connection with the organized system keep up the powers of animation. Doctor Rush's argument in favor of life being a forced state from the brain by the nerves, is as feasible, and more so, than Samuel Thomson's; but I feel perfectly satisfied that the blood is the life—this fact is recorded in the bible in a number of places. These elements operating upon the organized system, keeps her in motion. The formation of our system, and the means of life, shows the wisdom of that God that made us; and the business of a physician is not to correct the system, nor to form one new part to it, nor to change the circulation of the blood from a natural state or course, nor to disturb one of her parts; but rather to assist her by removing the obstructions that are in the way. We should examine where the obstructions are that is the cause of disease, and try to find what has disturbed nature's rules, and use the best means to remove it. I expect the present piece to be the beginning of a new system that may grow till it will arise to some degree of perfection. The most common plan of curing diseases appears to be contrary to nature, and dangerous. If a person applies to the medical doctors, it frequently appears to me as a man setting up his life at stake, in which he stands a chance to lose his life; and if he gains it, the constitution is injured, and sometimes irrecoverable.—The vast divisions and contradictions in sentiments

that exist among the medical doctors, both in their practice and books, is sufficient to convince us of the impropriety of their system, and, according to Christ's sayings, will ultimately fall; for he says, that a house divided against itself cannot stand. The administration of poison into the stomach, which immediately is introduced into the blood, which is contrary to the life of man, and assists the complaint instead of the patient, and is contrary to reason; that the medicine that is contrary to life is called up to assist. The numerous accidents that have happened in the country among their practice, has prejudiced a number of people so that they call on no physician when they get sick, and a great number of the rest are at a stand what to do in time of sickness; while others are loaded down with the effects of it, and are not able to extricate themselves; and when poison is introduced into the stomach, nature has to overcome both the disease and medicine, or the patient dies.— I suppose that the face of nature has produced her own remedies, and in a general point of view, medicine should be taken in a natural state like the productions that are used for diet. The effect of a distillation to get out the spirit of the herb, or seeds and root, may answer in some cases; but it frequently changes the substance. Just observe the different effects of rye or corn, and then try the spirits of them, and see the effect on the stomach and blood. There are a number of things that the substance flies away in the vapor in a state of distillation. Many of those roots and herbs that I make use of cannot be applied to advantage in any other way but in a natural state. Lobelia is destroyed in a great degree by warmth, much less in a state of distillation; the liverwort is nearly so, and there is but a few medicines that possesses the same quality after going through a state

of distillation as before. The human stomach is the best judge of medicine, and good experience is the best way to try their virtues and effects on the human body; for the virtue of some is in the spirit of the substance, and others it is in the solid parts of it; and the sensitive powers of the stomach will soon find out the virtues. The stomach always possesses a portion of acid in an ordinary state of health, and it is said that this is governed by the quantity of gall that is spilt in it, and the gall is generally governed by the strength of the diet we live on. If we live on salt and fat diet, our gall is apt to over spill and sour the stomach too much. It is safer to live on fresh, weak diet in general. The stomach is in some degree like a still; when it does not sour enough, we are not well; when it over sours, we are also unwell; but if it can strike a right sour, all is well, and the stomach will discharge herself right. And there is a kind of vapor that rises up and moistens the coat of the stomach and pipes even to the mouth; and this watery substance is drawn through the canals of the stomach into the blood by large quantities; and discharges, part by way of urine, and part by perspiration. The quantity of watery vapor that rises up is governed by the sourness of the stomach; and if substances that we eat have a tendency to stop up the canals of the stomach, this watery substance frequently raises more plentifully to the mouth, and is called a water-brash, and so it acts when the stomach over sours. Sometimes the canals of the stomach calls for more water than raises up in vapor; then the dryness of the throat and mouth demands a drink of water. At other times there is a humor settled on the coats of the stomach, which agitates it, and it throws up all the substances that are in it, or nearly so. And at other times, the

humor strikes in all the way through the hollow of the body; from the throat to the rectum or lower part of the body, and this humor is on the inside of the bowels. If this humor is in the pipes and throat, it causes a hoarseness and injures the voice, as well as often produces a cough. If it is in the stomach, the effect is a puking; and if it is in the bowels, the effect is a purging; or if in the stomach and bowels at once, the effect is a cholera morbus. I am of opinion that this disease can be cured by a regular course of medicine, and sometimes by one operation of sweat, and then give a few doses of No. 1, and keep a moist sweat for a while. But the most common cause of disease is too much matter in the blood, that shuts up the pores of the body, and throws people into different situations in life. We may draw some conclusion of the violence of the complaint in a thin, clear skin person by the color of the blood through the skin; if it looks dark, you may suppose they are dangerous, and more so when it looks cloudy. In diseases of less violence, the skin is more clear, and has a more common appearance; and other complaints come from obstructed perspiration by means of cold, and some by humor in the blood struck out against the skin, and thus shuts the pores of the body. In this case there should be a driving medicine taken inwardly to keep it out, and the pores opened by doses of No. 1, and steam with the stomach empty, or nearly so, of food, and it to be fresh and light, which is made use of. Both the creation of humors in the blood, and the striking them in on the inside, are from various causes too many to mention in this short work; but the most leading causes that create humor, are as follows: first, living on salt, rich diet, secondly, eating too many kinds of diet at a time; thirdly, keeping the stomach overstocked with food

too long at a time; fourthly, drinking too much spirituous liquors, or what may be called hard drink; fifthly, the measles, sickly and unhealthy climates, and bad water.

The next is what strikes them in on the bowels or inside; firstly, cold on the outside; secondly, large draughts of cold water in the inside; thirdly, percolate or sulphur on the outside; fourthly doses of physic which purges the inside. But there is a great difference between purging the body and purging the blood, and especially if the body is purged with a poisonous medicine; for the blood will gather a part of that poison out of the stomach, and carry it all through the whole body. And this is not the only bad effect; but if we purge the body while the pores are shut up, it frequently draws diseases in on the inside; because diseases frequently draw near to the place of discharge, and sometimes even affects the part where the discharge is; and the weight of that substance that passes down the intestinal canal is more forcible of itself than any other discharge of the body. But it needs force, because a thick morbid substance will not pass like a watery fluid; and for this reason the passage by urine is not so often obstructed. Whatever increases the motion of the bowels, generally causes a purging; and when poison is passing through the bowels, they are roused into motion to resist its evils, and it is very wrong to force nature, instead of assisting her to do her duty or discharge her office. We may assist her by injections, which will never have a bad effect; and sometimes we can administer an oily substance that will make the bowels more pliable and capable of moving.—The effect of administering hickory bark lie, in small portions, as will hereafter be described, removes the common matter from the insides of the bowels, in a

degree, and renders them more slippery and limber, and is an assistance in purging, and so are fresh broths in some degree; and there are certain medicines that either draw out or drive away the stagnation of the bowels, and adds sensibility, which quickens the bowels that are not poison. I will name sulphur as one, elder bark as another, and castor oil adds to the motion of the bowels. There are many others too tedious to mention at this time. There is one rule that we may judge these means by—that means that adds sensibility and quickens the bowels: in repeating the doses, less will answer, and that means that forces nature; nature braces against it, and you must increase your doses as you repeat them. But I am fully convinced that there is more purging done by doctors than is profitable, and not one sixth as much sweating done as ought to be done for the health and safety of the people; for the discharge through the pores of the skin is the most difficult of any other, and according to nature's rules, should be almost without intermission, while the other discharges have their proper intermissions; and to add to the difficulty, the discharge by perspiration is in a degree invisible—and, it is thought, that something like one fourth of all the watery fluids that are taken into the mouth ought to pass off this way in an ordinary state of health. And what makes it difficult, it depends on the force of the heart, that drives it not only down but upwards to the surface of the body; and there appears to be a balance between the motion of the heart and the opening of the pores, that whatever causes the heart to motion, has a tendency to open the pores; and moistening the skin with warm steam, has a tendency to soften it, and the pores are easier opened; and the steam going into the heart department improves its motions very much.

and of course produces a free perspiration. The medicine called the first part of the composition, or No. 1, opens the canals of the stomach and skin, and assists in this process. By purging the stomach, we may move the fountain of filth out of which the blood has been already formed; and if we move it with a poisonous medicine, the blood in the mean time will receive a part of that poison, and of course is worse than before.

Now, the grand question is, which way shall the filth that is already in the blood pass off? Shall it be drawn back to the stomach from whence it came, and pass off in that way, which is contrary to nature? — or shall it continue to pass right through the pores of the skin, and be discharged in that way? If there is not a regular discharge through the pores of the skin, nature becomes unharnessed, and instead of throwing her substances towards the surface of the body, they are thrown back on the stomach. Goldsmith says, that there is no man that starves to death; but when the stomach gets empty, the poison out of the body gathers in and poisons them, and they go distracted and have strong symptoms of poison. This is the way that people lie and eat nothing of notice, and are not hungry, that are said to be fed by sickness; but it is by operating contrary to nature. I have known some that were said to lie for weeks and receive very little sustenance, though they had been hale, hearty persons immediately before, and they repeatedly took physic and purged in the mean time, and often were puked; and there appeared plain discoveries of filth still coming from the stomach, and the patients still reducing in their flesh. But this has not been the case with one of my patients, though they have amounted to eleven or twelve hundred; and near ninety of them of the consumption. It is very

evident to me, that nature should keep her regular course in sickness. If the stomach is overstocked with filth, the sensitive powers of it will find it out, and nature will make her motions to throw it off; then we should assist it by administering an emetic, which, if done right, will not only clear the stomach in a few minutes, but will be apt to cause a free perspiration. Clearing the stomach of filth will prevent the blood from being more filthy, but it does not remove that filth that is already in the blood; and as the blood has but two natural discharges, reason tells us that she must discharge her filth one of these ways, that is, by perspiration or the way of urine; and as I fancy that none will argue that she must discharge her filth by the way of urine, then it follows that it must be discharged by way of perspiration. Let the reader pay particular attention to these plain remarks; for the blinded way that many of the doctor books are written in, is calculated to keep a great body of the people in ignorance. For often when they touch a particular point, in which they think the people may gain some useful knowledge, they have it printed in some dead language, or use some strange phrases; and every medicine that is poison, is opposite to life, and of course assists the complaint instead of the patient; and except nature is capable of overcoming both the disease and medicine, the patient dies. I have thought that there are many cures among them like many in the country, that are taken up on uncertain premises, that persons happen to take some certain means about the time that nature has gained her point and overcome the disease and the whole cure is ascribed to whatever means they have taken. One or two circumstances like this establishes the means they have taken to be a sure cure, when at the same time likely it is right opposite. We have

no right to trust the virtue of the medicines without proper experience; but when diseases are in the inside of the body, my plan is to drive and sweat all out; but when on the surface of the body, though I try to keep the person at least once a day in a sweat, so as to keep up this discharge, I frequently give No. 4, which is a drawing medicine, and moderately purges.

I have made a few remarks on the outlines of this system, to show that it agrees with reason and with the bible. I want those that practice this system to pay particular attention to the rules laid down, and we will depend alone on the God of the whole earth for his aid and blessings; and as we shall have a great number of the learned of our day to encounter, let us be careful not to bring a reproach on the system; and though the system may look new, and you cannot see into the particulars, I will assure you that all the general or leading points have been faithfully tried. Do not let this baffle your faith, because there is but one general way of cleansing the blood; for Paul says, that God has made of one blood all the nations that dwell on the earth; and it is thought by the strongest minds that the medicine that will cleanse the blood, will cure diseases that are opposite to each other, though I shall change the medicine as well as the management in a degree. The medical doctors have one rule of salivating to cleanse the blood; that is, to throw off diseases by way of the glands: but mine is to throw off diseases by the pores of the skin. And for the purpose to discharge diseases by this way, I will lay down a plan: there is a balance between the motion of the heart and the opening of the pores of the skin; the heart acts something like a pump, that throws the blood out to the extreme parts of the body, and forces the water through

the pores of the skin; if any thing should retard its motion or power, the pores are no longer kept open, and the blood that should fill the extreme arteries and veins now fails to flow out as before, and crowds more on the insides, and the filth that is in the blood gathers round the heart and stomach, and the patient feels sick at the stomach. And if the motion is much retarded, the feet will immediately get cold for want of sufficient blood. This coldness begins in the feet, because they are furthest from the heart; and as the heart motions slower or weaker, this coldness pursues up the legs, and, as it passes the knees, it immediately commences on the fingers; and as it still grows slower or weaker in motion, this coldness pursues up the arms and thighs into the body, until death is the consequence. There are two reasons why the blood is not thrown out: one is, a weakness of the nerves that causes the heart to motion weak or slow; the other is a thick, stagnated blood, that is hard to throw out. There is more to be done by improving the motion of the heart, than what is generally believed; long experience has very much enlarged my views on this subject, so that I suppose the very symptoms of death have been baffled; as the blood flows out into the limbs, the cold, numb, death-like feelings vanish sometimes, and the sickness driven from the stomach; and in the meantime nature discharges her surplus water through the pores of the skin.

I have cured the cholera morbus, when the limbs were cold, without any medicine, by improving this motion; and have thought that the sick stomach, or milk sickness, could be cured in the same way. I have known some take large doses of an emetic, and in the height of puking it was stopped this way. This has been tried to my satisfaction, and the same means will commonly stop a cholic.

A person that is acquainted with drawing water with a pump that leaks, may form some idea how the heart throws out the blood. If a person works a leaky pump slow, the water sometimes falls back or leaks as fast as they raise it, and they gain none; then, for the purpose of gaining on the leak, they must improve their motions on the pump, and thus draw it faster than it can leak. So it is with the human body; the blood is thrown out through the arteries, and the veins gathers it, and brings it back; and if we want to fill the extreme vessels, we must increase this motion so as to throw it out faster than it returns by the veins. Then to improve the motion of the heart, is as follows: covering a person all over when he is sweating, and having the steam to go immediately to the heart and lights, warms the blood at the fountain, and of course sets the heart to motioning; and as heat has a tendency to drive diseases, it is proper to apply it to the heart, so as to drive disease from the seat of life towards the extreme parts of the body; and as heat has the tendency to make the blood more active to flow, it is necessary to apply it all over the body; so while it warms the blood and increases the motion of the heart, at the same time it moistens the skin, and thus opens the pores where it is applied with steam; and as whiskey or camphor is driving, a small portion of one of them may be mixed with water for steam, and the smell of these will help to remove the sickishness of the smell of the sweat, while the vapor goes to the seat of life -- But persons who are not in a puking position will find it an advantage to take a dose of No. 1 before they sweat, which will not only assist in sweating and driving disease from the stomach, but will increase the motion of the heart for near twelve hours afterwards; though doses of it may be taken at any

time before or after they sweat; or if they do not sweat regular, make use of a warm drink of tea to warm the stomach on it,

There are three parts that belong to the blood; one is the red part, or what some call the red globlet; the second is the matter part, which some call the gluten, and others the crassamentum; the third is the water part, that some call the serosity. I suppose that one point in doctoring is not only to know that there are such parts in the blood, but to know how to improve or diminish either of these parts. I have thought if we knew these things perfectly, we could guide people into health, beyond what could be expected. I have not mentioned this point because I considered myself master of it, but that it should not be altogether neglected, as it has too often been; but that it should be the business of some industrious minds that perhaps are deeper than mine. I will only conjecture a few things on the subject. In the first place, I suppose, that the red part is the most essential to life, and I consider that it is cohesive, or has the property of sticking together more than the others; and the fifth that it is affected with most is humorified; and I suppose that saffron bark, prickly ash bark, or horse radish root, has a tendency to increase this part of the blood, in a degree, if taken inwardly; and I suppose that it is necessary to improve it in cases of relaxation or stagnation of blood; and the way to improve the gluten is to make use of wild or tame comfrey root inwardly—this only should be done where a person is well, and cannot sleep sufficiently. The way to improve the water part or the serosity, is to live on a weak watery diet; the way to diminish either the red or watery part, is to make use of the lancets, as they run freer from the veins than the gluten; and the way to re-

duce the matter part, is a regular course of medicine, as will be found after the patent—that is, to lower the fountain, that is the stomach of solid food, so that it will not throw out as much matter as usual. The doses of No. 1, that belongs to this course of medicine, with the sweats, throws off abundance of matter from the blood.

The gluten of the blood is a kind of oily matter, that the other two parts, where it is in a pure state, is willing to mix with; but sometimes there appears to be a matter in the blood, that the other parts appear to disown, I suppose, because it is not of the right kind. In this case each part appears to separate to themselves in a degree in the body. This can often be discovered in the face, and sometimes in other parts, of a thin, fair skin person; they appear to be spotted or cloudy—sometimes one spot is red, another purple, and some pale—the pale spots is the water, the red is the red part of the blood; and the purple is the matter part. We may often see these purple spots in drunkards, as hard drink has a tendency to create too much matter in the blood; this is what sometimes increases his flesh, makes him appear to be bloated, and, having too much matter in the blood, is the causes of all stagnant complaints, and may be called the common cause of diseases, and sometimes shuts the pores of the body. The blood, which is the life, is out of order while the component parts of it is not mixed as they ought to be; for there is more dangerous diseases that come from this cause than any other one cause. It is necessary not only to know that there is such a surplus matter in the blood, but also to know how to remove it. As the humor in the blood can be removed by reducing the system by physicking, diet, and letting off blood. But I have seen no plan that reduces the matter faster

than the other two parts, or in other words to remove the surplus matter from the blood, that is no plan that man has devised, except the one that I have laid down. But nature has had a plan, that is to throw it off by the way of the glands, under the name of a bad cold. Sometimes people have a cold, for the pores are shut; but others are open, and we can see a surplus matter coming from the head and breast, sometimes in abundance. Do we not learn from this that nature is throwing off this matter?—And this is her way of discharge, when she does not discharge it fast enough through the skin. A person can satisfy himself on this subject by drawing blood from another in the commencement of this disease, and let it get cold; then look at the quantity of matter in proportion to the other two parts, and when this disease is done operating, try the same experiment of drawing blood from the person again; then examine the proportion of each part, and see if nature has not discharged some of her surplus matter. Sometimes this matter, not having a free discharge from the lungs, it affects that part, and becomes a consumption, or the person is affected for a longer or shorter time. But the medicine I have called No. 1, or the first part of the composition, has the tendency to open the pores and drive out this matter in abundance, and at the same time destroy the humor which is in the blood faster than purging. Take 3 or 4 doses of this medicine, going to bed and covering a little warmer than usual, will produce a copious sweat in a few hours, and in the mean time the surplus water and matter will both be driven so near the surface of the body, that the person will feel cold next to the skin. Though this process throws off some matter and water, yet I prefer a regular course of medicine, in which there is only two doses

of this medicine given in twenty four hours, and the rest is done by other medicine, steam and management. I make use of the three elements on which life so much depends; that is fire, water and air.— I make use of fire and air to raise the watery vapor, and place it near the seat of life, that is the heart; while the air blows the heart and lights the fire, warms the whole system; and the water moistens the glands as well as the surface of the body, and passes through the whole system; while it assists in opening the pores by moistening the skin, it all, with the medicine, assists in strengthening the motion of the heart. I have said that the red part of the blood is cohesive, though the skin appears like a sieve, that will let water and matter pass through; but the red part is retained, and must be reduced by other means, if at all. Another advantage in warming the blood is, that it makes it more active to force the water through the skin; and another equal advantage is, that it assists in mixing the component parts of the blood well together; and it also assists in forcing that part that remains in the system out of the arteries through the flesh into the veins, and thus forms its revolution. As I have now made some mention of what will improve, as well as what will diminish the several parts of the blood, and expect this subject will again be embraced when applied to certain diseases, I will leave this point; and lest there should be some doubts whether the gluten of the blood can be forced through the pores of the body, I will produce some evidence; that is, while a person whose blood is foul is going through a regular course of medicine, the matter in the meantime will cause the skin to be sticky, and the clothes that are next to them will frequently stink, even some time, till it becomes disagreeable to stay in the room.

I have ordered some to be washed once a day to remove this matter and stink from them; though there are none that smell so disagreeable as the real typhus fever. Another evidence that the gluten of the blood is removed in this process—that is, if any person should doubt, let them draw a small quantity of blood before this process, and examine the component parts when it is cold; and after the process, try the same experiment, and see if there is not less matter in the blood after than before. When the blood is purified by subtracting the matter and humor from it in this way, then improve your diet gradually, and take two doses of No. 5. which will strengthen the nerves as well as improve the blood in proportion.

This appears to be the only wise means of cleansing the blood. But lest this system should be disputed, and some conclude the plan is wrong, and that we should purge the body more to get the blood clean. I will say something more on the subject, as custom or habit has a great impression on our mental faculties; as the practice of purging has been a long time held up, the subject is more difficult than it otherwise would be. In the first place, I would ask the question, which way the fluids pass through the body? Doth it pass from the stomach towards the places of discharge, say the bladder and skin? or doth it enter them first, and work towards the stomach? I think the answer will be by all, that it enters the stomach first, and passes out towards the skin; that this is the natural course there is no room to doubt. If the blood discharges itself this way, it follows that if any filth is removed from the blood by a purge, it is contrary to the laws and rules of nature. I will readily admit that the filth that is already in the stomach and bowels, may be removed in a degree by puking and purging, which may prevent the blood

from getting worse than it is. But the question is, how shall the filth that is already in the blood pass off? Shall we purge it off contrary to nature's rules—or shall we force it through the skin? If the stomach is one department in the body, and the arteries thro' which the fluids pass is not the same but another, it follows then that cleansing the stomach doth not cleanse the blood, no more than washing one house cleanses another. The means that are intended to cleanse the blood must pass through it as well as the arteries through which it passes; and as water is a cleansing element, we should make use of it, and with it administer such medicine and means as should give the water a free passage through the organs of life, and such as would rouse the blood into motion, as it is reasonable that we cannot cleanse without motion. But to cleanse one room so that another might be clean, is not so unreasonable as to poison one that another might be cleansed, and at the same time the poison have access into the room that should be cleansed, and possesses no cleansing quality. But I wish to be far from accusing any person of using poison to cleanse the blood; for I believe that there are some of each order that will not do so on any condition.

I have made as many remarks by way of explanation as I have room for; I shall immediately introduce a copy of the patent right for Doctoring, which is a better plan of Doctoring of itself than many others; but the rest of the book may be a great assistance.

THE UNITED STATES OF AMERICA.

To all to whom these Letters Patent shall come:

WHEREAS, JOSEPH BAKER, a citizen of the United States, hath alledged that he has invented a new and useful improvement in Medicine; which improvement he states has not been known or used before his application, hath affirmed that he does verily believe that he is the true inventor or discoverer of the said improvement, hath paid into the Treasury of the United States the sum of thirty dollars, delivered a receipt for the same, and presented a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose: These are, therefore, to grant, according to law, to the said Joseph Baker, his heirs, administrators, or assigns, for the term of fourteen years from the fifth day of May, one thousand eight hundred and thirty one, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement; a description whereof is given in the words of the said Joseph Baker himself, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these Letters to be made Patent, and the seal of the United States to be hereunto affixed. Given under my hand at the City of Washington, this fifth day of May, in the year of our Lord one thousand eight hundred and thirty one, and of the Independence of the United States of America the fifty fifth.

ANDREW JACKSON.

By the President.

M. VAN BUREN,

Secretary of State.

City of Washington, to wit:

I do hereby certify, that the foregoing Letters Patent were delivered to me on the fifth day of May, in the year of our Lord one thousand eight hundred and thirty one, to be examined. I have examined the same, and find them conformable to law, and I do hereby return the same to the Secretary of State within fifteen days from the date aforesaid, to wit: on this fifth day of May, in the year aforesaid.

JN. MACPHERSON BERRIEN,
Attorney General of the United States.

The schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said Joseph Baker himself, of his improvement in medicine.

To all whom these presents shall come:

Be it known, that I, Joseph Baker, of Jefferson township, in the county of Ross, and state of Ohio, have invented a new and useful improvement in Medicine, and that the following is a full and exact description of the construction and operation of the said Medicine improved by me.

The schedule referred to in these Letters Patent, and making of the same, containing a description in the words of the said Joseph Baker himself of his improvement, being a mode of preparing, mixing, compounding, administering, and using the Medicines herein described, in the manner and in the diseases hereinafter mentioned; that is the mode of preparing and compounding medicine for an emetic, and also to cause a free perspiration, to be administered in diseases caused by cold and obstructed perspiration, such as fevers, rheumatisms, dysentary, dropsys, consumption, pleurisies, bold hives, and all stagnated complaints, with some others.

N. B. All roots, barks, and herbs must be first dried, pounded in a mortar, or ground in a mill before they are made into medicine.

Part the first.—Take seneca snake root, one ounce; take liverwort tops, three quarters of an ounce; take robbins' plantain roots and tops, one quarter of an ounce, mix these well together. This forms the first part of the composition.

Part the second—Take the bark of the root of sassafras, a half ounce; take the inside bark of wild cherry, a half ounce; take the inside bark of elder, a half ounce; take sulphur or brimstone pulverized, a half ounce; mix these well together. This forms the second part of the composition.

Part the third—Take lobelia, or what may be known by the name of Indian tobacco, the tops gathered in September, two ounces. This forms the third part of the composition, which is to be administered all together, or in parts as the nature of the case may require.

It should be remembered, that equal portions of these three parts forms the whole composition of medicine.

It should be remembered, that a dose of either of these powders for an ordinary constitution is an average tea spoon full, and allowance should be made for the different constitutions of people.

When the violence of the disease requires a speedy remedy, and nature calls for an emetic, and there is an obstructed perspiration, it is necessary in this case to give a dose of powders of the whole composition, and wash them down with half a pint of cold weak ley, made of the bark of shellbark hickory; and if this does not operate as an emetic in fifteen minutes, give a second dose, with a less quantity of ley, or just enough to wash it down; and if it doth not ope-

rate, in the same time you may try the third and fourth on the same rule, which will scarcely fail.— This process commonly produces a free perspiration. Then continue the process by giving a dose of powders of the first part of the composition, and in thirty minutes sweat until you get a free sweat over the body. The way to sweat is to cover the person all over, and make use of two oven lids, one at a time, have the feet in warm water, and sit your oven lid under the cover, and form a mixture of one third whiskey and two thirds water of about three gills, and steam it on the oven lid as they can bear it, and repeatedly sup warm tea; and when done, put them to bed, cover their breath a short time, with a hot stone quenched and wrapped up in a wet cloth at their feet; their teas should be spice bush or red pepper; during sickness make a drink of water by quenching a hot coal in it till the chill is off.

Take two doses of the first part of the composition in the course of twenty four hours, and one of the second part, dividing the time of taking them, and sweat once a day for three days; and if the person have the fever and ague, sweat once a day till it leaves them, and keep up a moist sweat as steady as possible during the whole time, and keep them warm in the chills and fever. Their diet should be light, such as chicken and squirrel broth with a little of the meat, and as little bread as possible; they can make use of rice or homony, but keep the stomach as empty as convenient, and especially for three days; and after that they can increase their diet gradually until well.

If the disease is less violent, you may leave out the first part of the process, and begin by giving a dose of the first part of the composition, and then sweat, and so follow the rule as is laid down above:

and if it is found that the first part of this process is necessary, it can be applied at any other time.

In pleurisies and bold hives, and many other complaints, it is only necessary to pursue the rule, until the patient recovers, which is not likely to be long. Let it be well remembered, that nature is the grand physician, and we are only to assist her in removing the obstructions that are found in her way, as far as is in our power, and that we should pay particular attention to her claims and try to supply her wants if possible.

In cases of less violence, these powders may be taken without a preparatory sweat, either in whole or separate parts, as the case may require.

JOSEPH BAKER.

Witness—NATHL. MASSIE,
HENRY S. LEWIS.

Here we notice again that we do not wish to force nature into terms, but to assist her to fill her office; keep it close in mind, that too many kinds of medicine, diet, or teas, at a time, instead of curing, administers disorders, the stomach not being able to digest them, though they are the very sort that would have answered the purpose, provided the stomach could have managed them, but now they become filth, and lay in the stomach. There is abundance of harm done even by good medicines, that is, when there is too much or too many sorts at a time it over-powers the stomach. There are more people die that are killed with an over-stock of medicine and different kinds of teas and diet, which over-stocks the stomach, than die of neglect; for the stomach being weak, is not able to digest it, and it becomes filth, tho' we should not only be particular to not administer too many kinds of medicine

at a time, but not change our medicine, teas and diet, oftener than we can help, and not humor the patient's appetite, for we may be sure that the claims of the appetite, and the real claims of nature frequently differ, that the appetite of man and beast have frequently claimed things that are poison, and have killed them. The practice of drinking spirits to extremes, is to humor the claims of the appetite—and people, through kindness, frequently offer the sick different kinds of diet and teas, and do not know that they are injuring them, and making their disorder worse.

I hinted above that the stomach is the best judge of medicine. If any substance is thrown on the stomach, the sensitive powers of the stomach will immediately accept of it, or make war with it; sometimes create convulsions in the system, and other times throw the substance back by way of the mouth. The practitioner ought to try to govern themselves in such a way as not to expose themselves to the penalty of the law. I will notice here that I sent samples to the patent office for several more medicines to be patented, for my system of practice; and although the patent law says that a man shall lay in his whole system, and keep nothing back, or to this amount—yet the present administration would not receive them, and stated that there were more than one invention contained in the system; but as the bible tells us to be subject to rulers, and those that are in authority—so let us try to comply as near as the nature of the case will admit. It will be kept in mind, that the grand point is to cleanse the blood, and if the blood is pure it cures almost all diseases.

A set of medicines as I use them.—No. 1, take seneca snake root one ounce; liverwort roots and tops three quarters of an ounce, robins plantain roots and tops, one quarter of an ounce. For a substitute, seneca snake root will answer alone, or use it with either of the others.

No. 2, the first species, or the second part of the composition. Take equal portions of pulverized brimstone; elder bloom or bark; the inside bark of wild cherry; sassafras bark of the roots; and angelico root. The second species of No. 2, take pulverized brimstone; inside bark of wild cherry; angelico root; and hoarhound tops; equal portions; Third species, brimstone pulverized; angelico root; hoarhound tops; and allcompain roots; equal portions.

No. 3, the first species, is an equal portion of 1, 2, and 3, as is named in the patent; these are mixed together. No. 3, second species, take lobelia, gather the tops in September, dry and powder the seeds and tops together, one ounce and a quarter; take tobacco dried and powdered, a quarter of an ounce; take sassafras bark off the root, dried and powdered, a half ounce; mix these well together, then follow the rule laid down in the patent in administering it; a dose is a rounding tea spoonful.

No. 4, first species, take burdock root, dried and powdered, one ounce; take elder flowers, dried and powdered, a half ounce; take pearlash a half ounce; mix these well together; for a dose take a rounding tea spoonful. No. 4, second species, take burdock and pearlash, as above mentioned, and put wild salandine, in place of the elder.

No. 5, first species, three fourths spknard roots, and one fourth peruvian bark; a dose is a rounding tea spoonful. No. 5, second species, two

thirds spiknard, and one third mountain sassafras roots. No. 5, third species, one half spiknard, one fourth solomon seal roots, and one fourth sassaparilla.

No. 6—Take a pint of linseed oil, and an ounce of sweet oil, and boil them in a kettle on coals for nearly four hours, as warm as you can conveniently, and take a half ounce of borax, four ounces of red lead, and one ounce and a half of sugar of lead, and pound them in a mortar, or grind them till they are well powdered, and take your kettle off the fire, and stir the oil while you thicken these into it, and continue to stir it till it gets blood warm; then try it by taking out a little, and let it get cold; and if it is not thick enough for plaister, you can set it on the coals a few minutes, and continue to stir it till it gets blood warm again, and then stir an ounce of the spirits of turpentine in it; or if it was thick enough the first time, it need not be heated again. These plaisters need to be harder in the summer than in the winter; and it can be spread on writing paper or on the grain side of thin leather, and applied to the place and it will stick. I have made use of this plaister for every kind of wounds, bruises, sores, burns, white swellings, rheumatism, ulcers, sore breast, tooth ache; and even when there was wounds in the inside, it has been applied to the outside, and it has gained almost universal credit, and answers in place of almost every other kind of salve or plaister.

A regular course of medicine.—Nos. 1 and 2, may be either compounded or given single, though I most generally compound them, to make them easier taken; but if taken single the No. 1 should be given first. In an ordinary constitution there may be four doses of these powders given in 24 hours; allowances may be made for the different constitu-

ations, as well as allowances for their being reduced. By the present sickness, a dose is a rounding tea spoonfull—mind in all cases our tea spoons should be of an ordinary or common size. When we are thus prepared, then give a dose of powders, or a drink of sirup, (as the same powders are made in sirup in some cases) as the case may require; and in thirty minutes sweat a regular sweat. And in this course of medicine, their teas should be spice bush or red pepper, during sickness—store tea may do; make a drink of water by quenching a hot coal or crust in it, till the chill is off; if the patient is too costive, make a drink of hickory bark, weak ley or fresh broths, till they get more loose in their bodies; take four doses of powders every twenty-four hours, dividing the time of taking them, and sweat once a day for three days; but if the person have the fever and ague, or consumption chill, sweat once a day, till it leaves them; keep up a moist sweat as steady as possible during the whole time, and keep them warm in chill, and more particular in the fever. Their diet most generally is No. 1, but sometimes No. 2 or 3, as the case requires. They continue this course for twelve days, dress warm in the day, and lay warm of nights. If they can exercise lively they will be the better of it; but if helpless, they ought to be rubbed or bathed frequently.

A regular sweat is as follows:—Make use of two bows, partly in the form of a half hoop, let them cross each other, and be fastened at the top, and the patient is set in a chair under these bows, and be covered all over; make use of two oven lids, one at a time; have their feet in warm water, and sit one of your oven lids under the cover; have a mixture formed of one third whiskey, and two thirds water; you may need a pint, or put two spoonful of dis-

solved camphor in a pint of water, and let them use one of these mixtures for steam on the oven lid as they can bear it; have them sup warm teas every half minute, if it is ever so little at a time, and continue this process till they get a free sweat all over the body; if one oven lid cools too soon, take it out and put in another, and so change till done. These oven lids should not be large nor very hot, only so you can see the fire spark through them, for the heat is overcoming, but the steam is nourishing; so the less there is of the heat, and the more there is of the steam, the better: And when done, put them to bed, cover their breath a short time, and give them some warm tea, with a hot stone quenched and wrapped up in a wet cloth at their feet; and after the sweat is recruited again in bed, then gradually cool off.

The above may be called a regular sweat, but if the person is too weak to sit up, so as to take such a sweat, there can be hot stones or bricks wrapped up in wet cloths, and put round them in bed; but remember that covering the head, and fixing one a foot or so from the mouth to breathe too, will do more good than ever so many round the body; the patient should drink hot teas just as in a regular sweat.-- This way of sweating is more disagreeable than the other, and not so safe.

No. 2—A second way of cleansing the blood when diseases are less violent, is to give three doses a day of medicine No. 4, and throw the person into a moist sweat once a day by exercise, being cloathed warm or any other way, & keep the same rules of diet as that laid down in a course of medicine No 1. This should be attended to in diseases on the outside of the body.

If any person should take cold while passing through either of these courses, or if you discover any sudden change for the worse, give a small dose

of No 2, and sweat immediately, which will drive a cold out; and if it is a cholic, it will help, though a drink of weak lie, as has been described, will sometimes help.

And after the three first days, in which patients are directed to be kept in a steady moist sweat, in a regular course of medicine, they ought to be thrown into a sweat once a day by some means to keep the pores open that often at least during the whole time of their recovery to perfect health.

In following either of these rules, if the patient is hard to get into a way of sweating freely, you can give several doses of No. 1, fifteen minutes apart, or give some black snake root tea, or even Bateman's drops—none of them will do injury, as they are all sweating medicines, and no sweating medicine will create filth on the stomach; and then follow the rules as laid down in a course of medicine.

And if nature demands a puke or purge during the time that the person is going through either of these courses, it can be administered with safety; and afterwards continue the course as before, or make use of an injection at any time, which is more advisable than to purge—though if the patient have a passage every four or five days, it is sufficient.

The best means made use of for an injection, is the solution of elder bark in weak lie, with a small quantity of grease.

If either of the emetics should operate too severe, or you should wish to stop it at any time, you can either put the patient to bed, and cover them all over, and quench a hot stone, and wrap it up in a wet cloth and put it to the breath; and if that should not stop it, you can place several such stones round them till you get them into a sweat, which will generally stop

it; or a quicker way is to place them over the steam, and take them through a regular sweat.

The way to take No. 4—Put the powders in warm water or warm tea a few minutes before they are taken, to dissolve the pearlash, and wash them down with tea or broth.

By drinking plentifully of fresh broth and some weak lie, along with No. 4, generally purges moderately; and if any other means must be made use of as a purge, I would advise castor oil to be administered. The above purges are entirely safe to eat or drink any thing on them.

The sassafras or tobacco mixed with the lobelia for an emetic, is to set it in operation—wherein one third of the quantity will answer the purpose, which renders the puke entirely safe—as it is not safe the way Thompsonians use it, neither doth it throw off the bile as well that way as the way I make use of it; the weak lie is another assistance.

We may use these medicines to advantage while the patient is in a moist sweat, or sweating more or less every day. But if the patient does not sweat freely, we had better use No. 2 but very little, lest it should overstock the stomach; but No. 1 has not the tendency to overstock the stomach, as it is a sweating medicine and will be apt to work itself off, that is the substance of it, through the pores of the body. So if we should conclude that the patient needed a double portion of it to assist in sweating, we may give it safely at any time.

Burdock is a drawing, purging medicine, and strengthens the tone of the stomach; it enlivens the bowels by taking off the dead matter and adds sensibility, and thus causes the bowels to motion.

Pearlash has the tendency to destroy the mucus or

matter that is generally in the inside of the stomach and bowels, as well as to destroy the small worms that sometimes are in the stomach.

Diet No 1—This diet should be light such as chicken or squirrel broth, with but little of the meat, and as little bread as possible; they can make use of rice or homony, but keep the stomach as empty as possible, especially for the three first days.

Diet No 2—Use rice or homony, and drink plentifully of broths, such as chicken or squirrel, mutton, or beef, let them be rather fresher than common, or drink tea; and if you should use any bread, it should be very little, and a small quantity of fresh meat. Use such diet as the above till you about half satisfy the appetite.

No. 3—Use the same kind of diet as is laid down in No. 2, till you nearly satisfy the appetite, but not quite; and never lay down in less than two hours after you eat.

Diet No. 4—Live on a light, watery diet and mostly of vegetables, and always quit before you are quite satisfied; and use considerable sweetening in your diet, and always eat your meals two hours before going to bed.

Diet No. 5—Use mostly wheat bread and sweet milk, but not to eat too hearty.

Diet No. 6—Rules to go by in an ordinary state of health. Never eat too many kinds of diet at a time, nor change your custom of diet too suddenly, nor never lie down under an hour after you eat, nor never crowd the stomach too full, nor be extravagant in your changes of conduct or clothing; and keep an eye to the discharges from the pores of your body, nor drink spirits to excess, and keep your lusts and temper under a proper government. These will be means of health and propriety.

And as I sometimes make use of spiknard in No. 2. I will say something of its qualities. Spiknard was a medicine in the days when Christ was on earth.—A woman poured a box of this ointment on his head, and it was considered very precious—John xii. 3; though its virtues have been long tried. But little has been said in its favor among physicians of late years; but I shall unite with the apostles in saying it is very precious, and one of nature's best productions. It strengthens the nervous system in general, and is one of the best medicines for weak people that can be produced—it braces up the whole system of man, and is entirely innocent.

The reader will observe that roots or barks ought to be gathered in the fall or spring, when the sap is not up, for they are stronger at these seasons of the year, that is as far as you can conveniently; but there are some, like that of Seneca snake root, that cannot be found only when it is in bloom.

It may be that the reader may know all the roots, herbs, and barks by their names; but lest they should be at a loss to know Robbin's plantain, I will here describe it: it is a wild plant, the leaves are not as smooth as other plantain, though it resembles them by spreading low on the ground; but it has one or two singular, white roots, that frequently intersects another plant of the same species; these roots are white & larger than the rest, while the rest are small and near the color and appearance of other plantain roots.

The next thing I shall attend to, is to lay down some of the causes of diseases, their symptoms and cure, in a short way, of a few complaints, that some general knowledge may be conveyed to the reader of those complaints that I shall not name.

The first complaint I shall name is the ague.—This disease comes from filth in the blood, which

thickens it till at length it shuts the pores of the body; and the blood being mixed with a quantity of water and matter, becomes stagnated, and nature is always ready to lend her hand to assist in every complaint. She makes her periodical effort to open this discharge of the body, and to force a revolution in the blood, as the organization of the human body is such that there is a quantity of water thrown into the blood continually; and part of it is absorbed in the flesh as it passes out from the stomach by the arteries, and this water ought to be discharged; and the blood also itself scatters in the flesh as it passes out, and if the water is not discharged from it, it stagnates in the extreme parts of the body. When this stagnation commences, then the patient begins to feel the chill, for the blood, which is the life, loses its natural warmth, being mixed with a quantity of water, and being already over-burthened with matter, she fails to keep up her natural warmth. Now nature wages war with the complaint, and sets the body to trembling, or, if necessary, to shaking, to remove this stagnation and force a revolution in the blood, and she kindles a fire in the inside, or in other words a fever, for the purpose of warming the blood; and this warmth is increased till it gets high enough to force a revolution of the blood through all the small organs of the body; whenever this is effected there is no more use for a fever and it goes off immediately, and nature has gained her point. The pores of the body is now opened and a free discharge is a common consequence; but if there is not a free discharge at this time you may expect the contrast to be continued till either nature or the disease shall overcome; if nature overcomes, the patient will be relieved measurably for a short time till the blood stagnates again: but if the disease overcomes, death is

the consequence in a short time, though this contrast may continue for days; whenever this contrast happens, it may be called a typhus fever or cold plague; whenever nature gains her point periodically, it may be called an ague. I will let these few remarks suffice to show the cause of both typhus fever and ague, at this time.

The symptoms of the ague are as follows: The person feels heavy, sometimes for several days, and tired as though they were pressed down; this is the weight of matter in the blood, till the disease makes its attack, then they will have a shake or a chill and a fever follows and some times a head ache.

For a cure you may follow the regular course of medicine or commence the diet No. 2 by following the diet No. 1, is a little the surest to cure, but reduces the patient lower, and is not so apt to be complied with; but let them follow either one, they are not to exceed the diet No. 2 till they are clear of the complaint and then fall on diet No. 3 for some time, and so gradually increase and allow them no green fruit in neither fever nor ague until they are perfectly well; clothe warm and lie warm of nights—exercise as much as possible.

It is worthy of notice that in curing the ague or any species of fevers, the patients cannot overdo themselves so as to bring the disease back again; but the more they stir themselves and circulate the blood, being dressed warm, the better, as lying about and over eating are the worst things to bring it back of any other.

As the typhus fever or cold plague is connected with the ague, it has been a disorder that has baffled the skill of a great number of physicians. I will make a few further remarks on the subject by way of explanation.

The blood, which is the life, in this disease, as well as many others, has too great a quantity of matter in it. Here I will cite the reader to what I have said on the component parts of the blood. The extra quantity of matter is what chokes the pores and stops this discharge, and is hard to circulate through the small vents of the body out of the arteries into the veins. Nature, to force this circulation, creates this fire within the body, and calls for water to thin this densed substance. The appetite says she calls for cold water, but the fire she has raised within teaches that it should be warm, or as hot as it could be drank, so as to assist her in warming the body;* and as soon as nature has accomplished her design in forcing this circulation, she then dispenses with all her surplus water. But the question is, how shall we assist nature in forming this revolution and dispensing with her surplus matter and water? I answer, by giving No. 1, which increases the force of the heart for several hours after it is taken, and raising a steam, which doth the same, as well as to moisten the skin; and in this way assist in opening the pores of the body, that a free discharge may be obtained, and also lower the fountain, that is the stomach, of solid food, so that it shall not throw out as much matter from it as usual. An hour or so before the time of day that this revolution must be performed, or in other words, that the ague and chill comes on, give a dose of No. 1, and take the patient through a sweat, and keep the sweat up till the time of day is passed for the ague or chill

*This water may be impregnated with tea, so as to remove the sickishness of the taste; for the real claims of nature and the appetite frequently differ, for there are many things that are palatable that are poison, and nature wars with them as soon as they light on the stomach.

to come on. This both discharges the matter, in a degree and warms the blood to supply the claims of nature, as the blood in its thick state cannot pass this revolution till it is warmed; and this discharge ought to be kept up in some degree till the disease abates; and during the time the patient might drink freely of weak lie, made as described in taking of No. 3, or an emetic. If the patient should feel very weak, and the chill and fever are gone, so as to have no symptoms of them, you can partly stop giving the medicine above named, and give two doses a day of No. 5. And in any disease, if the patient becomes so costive that there is no passage in four or five days, you can give an injection, or administer No. 4, a dose every hour, with chicken or squirrel broth. till it operates, or till you give seven or eight doses, or give castor oil. But it should be remembered, that people living on low diet and sweating, will not have frequent discharges by stool; and we need not be uneasy if they have one discharge every four or five days. I will remark here that out of near seven hundred cases that I have attended for the fevers of different kinds, I do not recollect of ever giving more than three or four purges. The above remarks may be applied either to the typhus fever or ague, or any complaint that is attended with a chill or shake.

The common doctors often give astringent medicines for the ague: these choke the pores of the stomach, and keep the surplus, or even ordinary quantity of water, from passing into the blood, as nature calls for a surplus quantity of water in this disease, to carry off the surplus quantity of matter, that is already in the blood; and nature intends to carry off this matter that way, that is, by the pores of the skin; and choking these pores of the stomach, prevents this extra quantity of water from going into

the blood; therefore, this water does not stagnate in the body; but if the patient exercise enough to open these pores, and the usual quantity is again got into the blood, this chill or stagnation begins again as usual. I sometimes cure the ague on a plan something like this, though not by closing the vents of the stomach, but by giving the 2nd species of No. 4, three doses in twenty-four hours, and taking the patient through a sweat once a day; this medicine is very drawing. This keeps the water back from passing this way, and carries off by way of stool.— This is a very sure way of curing, provided there is not too much filth in the blood; but if the blood is very foul, these means sometimes draw it in on the inside too fast, and this makes the case dangerous; but in very moderate cases it answers the purpose. But many of the common doctors' patients, that have the ague stopped by astringent medicine, have a yellow, bad color for a long time; and in fact, till they, by exercise, or some other means, go through some copious sweats, they feel the symptoms of a common cause of disease, as is hereafter mentioned. These things show that the causes are not removed. But when my patients are cured by a regular course of medicine, they not only recover their color, but are relieved from all those feelings. It is evident that the ague is one species of stagnation of blood; but the typhus fever is a general stagnation all over the system, which may be called a universal effect of a common cause. It is almost incredible to say that this disease never has been investigated; as the cause of it has never been recorded on the pages of history, that I know of, till now. Through a period of six thousand years, and probably there has been hundreds of different plans of doctoring in existence; yet history records the symptoms of the complaint.

that have killed many of the ancient kings and rulers, that no doubt was the same complaint, in substance. The illustrious Washington died with a similar complaint; and the great Doctor Rush, of Philadelphia, was most likely killed by being bled in such a disease, which is very apt to prove fatal. The doctors still appear to be at a stand what to call it; some call it a typhus fever, others a slow fever, and others a nervous fever or chill complaint, hectic fever, pleurisy fever, rheumatic fever, spotted fever, &c., while they do not shew the cause; and all go to shew that they are unacquainted with it.

In 1814, when it made a general attack in this country, I lost two brothers, a sister, and a brother-in-law, by it.—The doctors called it a new complaint, and gave it the name of Cold Plague—and no doubt it has existed since time immemorial; and as it is the most common cause of any other, I shall therefore call it a universal effect of a common cause, as all other causes may be called, rather more accidental causes. The practitioner, in examining complaints, should try to know what part of them have been produced by a common cause; and also what part has come from accidental causes. One of the first things the practitioner should attend to is, to learn the symptoms of a common cause. By learning this, they can tell a patient's complaint beyond what can be expected. A man who had only studied my system two weeks, and had learned these symptoms, told another man's feelings, who had the consumption, so correctly, that the consumed man was convinced of the propriety of the system, and came, probably, 150 miles to be cured; and when he came and told the circumstance of his feelings, being told thus, he said it had brought him all this distance. It has been common for my patients to say, that I

had told their feelings nearly as well as they could. Some have signified that I used some curious art; but when most common diseases are found to come from one common cause, and a person, with only ordinary learning and judgment, may learn to tell a person's feelings, by learning these symptoms, in the greater part of common complaints.

The symptoms of those complaints which come from one general cause, are so various, that it would take too much room to describe them completely, but I will hint at the substance.

The first is the common typhus fever. The patient is frequently attacked with a chill, and some have several chills a day, and sometimes one part is warm and another cold at the same time; though there are some who never have a chill perceptibly, they are apt to feel a swimming in the head, or headache. Sometimes before they are attacked, and sometimes afterwards, even during sickness, another symptom still more common, is a heavy feeling all over, and sometimes pains in the limbs and sore all over; tired, pressed down and spiritless; sometimes a watery, tough phlegm, repeatedly coming up to the mouth, and a gnawing weakness across the lower part of the stomach; sometimes fever by spells—this is worse than if they had a steady fever. If the blood stagnates very bad, their feet will get cold; sometimes the part they lie on becomes numb, and when it works on still worse, the cold still pursues up the legs, and as it passes above the knees, it commences on the ends of the fingers; and as it improves, it draws more on to the body, on the arms and legs, and soon it invades the whole system; and while it is stagnating, sometimes they get spotted in the face, that is, one spot of the face will be red and another pale, and sometimes there will be purple

spots—this is what some would call a spotted fever: But while the patient complains very much, there is not so much danger; but as the blood stagnates worse, they complain less till at length they appear easy. Now is the height of danger, though they may lie sometimes for days in this way, and the first complaint of any notice is likely to be the agonies of death. But when this stagnation strikes the nerves, there is a jerking or twitching in the flesh, and sometimes even the cramp in the limbs or body. There are other symptoms that some people feel in the early part of this disease; such as a pain in the breast, that strikes through between the shoulders, and sometimes stiffens the back of the neck, and works up to the back of the head.

When this disease comes on slow, sometimes for months, and I have known some coming on for several years, it is still nearly the same symptoms, which some would call a slow fever; but sometimes nature resists the complaint, and warms part or all of the body—if so, they feel hot flashes, and sometimes there is a numb feeling either in part or all over the body, though this complaint often comes on speedily, and takes a turn in nine days.

For a Cure.—A regular course of medicine.

Bold hives, or what some call the croop, is the next disease we will make mention of here.

The cause of this disease is too large a quantity of humor and matter in the blood; and in connection with these, the person takes cold in the department of the heart and lights, which swells the lights often to an inordinate size, so that they fill the department; and the pores being shut, it forms a stagnation of blood all over the system, and the lights and heart not having room to work, are at length forced to stop, and the person looks strangled.

The symptoms of this disease are as follows:— The countenance of the person looks flush, and as they become bad, they look more purple, and their voice is shrill and sharp, with hard work to breathe, like a person having the phthisic in a wheezing posture. For a cure, give a dose or two of No. 1, mixed with one third sulphur; or if they cannot swallow the powders, make tea of them, and either sweat them regularly, or bathe their feet and legs in warm water, and give warm teas and cover them over till you get them in a sweat, and keep up the sweat till they are well; keep the blood circulating by rubbing and bathing during the time, which is not likely to be long, and the child should be kept on light diet for a while, to keep them from having another attack.

Costiveness is our next complaint. This generally comes on old people, and more apt on women than on men; but sometimes on all ages and classes of people. There are several causes that it proceeds from: one is, for the want of a stronger motion in the bowels; another is inward fevers, that dries the water, or forces it out of the bowels through the small vents into the body, as there are small vents through which the water soaks, not only in the stomach, but bowels. Sometimes these vents are too liberal, and drain the water off too close, and leave the morbid substance too dry to be comfortable.— When this is the case, if the patient can bear it, and not be obliged to fly to some remedy, it is generally indicative of a strong constitution, and one which is apt to endure a long time.

For a cure, the best rule is to change your diet to a fresh, watery diet, and use vegetables as much as is convenient. This rule is preferable to that of purging, for purging frequently makes it worse, ex-

cept that of castor oil, which generally has been for the better, because it renders the bowels more pliable, and rather strengthens the motions in them.—Corn bread is preferable to that of wheat in this disease; sour milk is preferable to that of sweet—salt meat should be avoided.

Cholic is our next disease. There are various species of this disease; one species comes from what I have last mentioned—that is, costiveness, or being bound in what is called the rectum, or in the big gut at the lower part of the body. In attacks of this kind it would be best to make use of an injection. Sometimes these attacks are very severe, and even dangerous. In this species of cholic the pain begins near that part of the body where the disease is; and the strongest sense of pain is still felt there, though it sometimes flashes up to the stomach, and even all over the body.

There are various other species of cholic. I shall lay down one general cause, which I suppose to be a weakness of the nervous system. I will here give a short narrative of an experiment of this kind: I was travelling near eleven years since in the western country, thro' a wilderness part, where there were but few inhabitants, and the diet of the people was very indifferent of course—corn bread of the coarsest kind, and some bacon and milk. And as milk has not agreed with my stomach for many years, I took but little of that; and bacon is a diet that, at home, I should not eat, on an average, two pounds a month; and for many years I have been disgusted with corn bread, and this was of the coarsest texture. So, after several days travelling, and living this way, receiving very little nourishment, I became very weak and also very cholicky; and one day, having near thirty miles from one house to another, by way of a

narrow, blind path, and feeling symptoms of the cholic when I started, but not dangerous; and as I travelled, the cholic increased till I had travelled the most of the distance, and at length I concluded that my journey on earth was about to be at an end; & among the concerns that occupied my attention, was, that I should die in the wilderness, and my family and connexions would never hear what had become of me. I had flattered myself that I would be able to hold on the horse's back till he would take me thro'; but at length all hopes began to fail; I concluded that I would get down and write a short letter, containing my name and place of residence, and cause of my death, that if any body should pass that way and find the corpse or the clothes, they might get in possession of the letter, and would be apt to write to my friends, informing them what had become of me. And as I rode up to a log, and with difficulty lighted on it, and I saw the top of a spiknard immediately by the log, and I bethought myself that I would chew some of the root, and accordingly I pulled it up and commenced chewing and swallowing the juice, while I was consulting how to form my letter. And I had but just swallowed some of the juice, till I thought I found some relief. This encouraged me to continue, till in the course of two hours I was able to pursue my journey; and feeling extremely weak before the cholic attacked me, and finding that the spiknard had strengthened me, this gave me an idea that the cholic came from weakness of the nerves. But there has been, since that time, a great number of circumstances happened under my notice, that have confirmed me in the opinion that the cholic comes from weakness of the nerves. I will mention some circumstances that will coincide with what I have said. You will find that gross, strong persons

are not often attacked; but it is the people of a weak constitution that are attacked in a general point of view; and again, when people are in a low state of health, they are the most apt to be attacked. I once thought that the cholic was confined to the stomach and bowels; but I have found that the whole hollow of the body is subject to it, and it is understood to be a collection of wind that causes it.

The symptoms are so various that I am at a loss to describe them. I might only hint at it. Sometimes when it makes an attack in the bowels, they swell perceptibly, and that is the part that pains are felt. A kind of weak feeling follows almost every species of cholic, and sometimes flashes of sickness are sensibly felt. When it attacks a person in the lower part of the stomach, they can frequently feel the stomach swell and a pain in it, with the same weakness mentioned above, and oftener the sick flashes that are mentioned before; and at other times a burning weakness in the stomach, and sometimes goes off by increasing the motion of the heart, which throws the person in a moist sweat, and at other times it attacks the breast, and sometimes crowds the heart and lights till it is difficult to breathe, and sometimes we can discover the breast swell, and sometimes a pain is one side or the other, either of the breast or bowels, and not settled long at a time, but rather moving from one part to another. But we may take it for granted, that any pain in the hollow of the body that is not settled there, so that we feel it, or feel some of it at all times, in that place, is the cholic.

A person passing through a regular course of medicine, while the bowels are empty, is very apt to be attacked. Here I wish to warn the practitioners to be on their guard on this point; their patients may be

taken strangely sick all of a sudden; if they have not taken cold, you may suppose that it is the cholic, and they are more apt when they are very low; you should give them suitable directions, so that they can break it off when they are attacked.

I shall now name a few things that I suppose are a sufficient remedy for this disease; one that is most sure is to take a dose of No. 5, and then go through a regular sweat; but taking several doses of No. 5, with sweating, has helped a number; and drinking of lie, made as has been mentioned, is sometimes a remedy. Another remedy that has been used to advantage, is to take several doses of mustard seed, fifteen minutes apart, that is a heaping tea spoonful at a time. Another remedy is to give an emetic, that is when the cholic is in the stomach. Another remedy is to quench bunches of hot ashes, and place them round the person as near the pain as is convenient; and if it is in the breast, quench a hot stone and cover the breath, and place it to the breath a foot or so from the mouth, which will be very apt to relieve the patient. Cholic root powder has been recommended as a cure.

The consumption, what it is, and what causes it. Any disease that has a tendency to consume the body or flesh away gradually, may be called a consumption. The most common opinion is that the liver or lights are affected to constitute a consumption; but I am far from this opinion. I have attended on about 170 cases for this disease, and I find it comes from different causes, and is lodged in different parts of the body; yet I have not made it a custom to call diseases a consumption that were not lodged in the hollow of the body. I knew one woman whose disease was below the short ribs in one side, and she was probably eight years in consuming away, and

became a mere skeleton before she died; and I doctored one man who broke something below his short ribs and near the loins, and was seventeen years sinking away, and several doctors attended him, and all agreed he had the consumption. In short, I have known people that I supposed had ulcers in different parts of the hollow of the body, and it was considered both by the doctors and people in general to be a consumption, that is while the patient consumed away. And as I have cured a number of this complaint, and consider it easier to cure those whose liver or lungs are affected, or if even the affect is in the light or heart department, than to cure those who have ulcers round the hollow of the body; because the former are more apt to discharge the matter by the way of the mouth than the others; and if the matter is not discharged, it becomes a hard lump, and the patient cannot be considered well while they carry in them this lump of useless matter. And while I lay down the cause of the complaints, I shall embrace under this head every general cause that consumes the body, such as sores or ulcers, in or out of the body.

First, it is a fact that sores are supported from humor in the blood. This humor frequently is mixed through all the blood in the body in a degree; but they often flow together and settle in particular limbs or parts of the body together, though they are more apt to settle near the discharges of the body than any other place. And as there is a steady discharge through the pores of a healthy person, the humor generally settles on the surface of the body of these persons, and there are some people who are affected in the rectum, because the discharge by stool is this way; and though the urinary passage is the purest water that is discharged from the human body,

yet there are some affected near the kidneys or neck of the bladder; for this reason they settle in healthy persons near the skin, but it depends very much on the force of the heart. When the heart beats strong in persons, there is but little danger of their taking the consumption; because the humor is driven to the extreme parts of the body, and a free discharge of perspiration is kept up in a general point of view. Here we may see the necessity of a steady exercise, or labor, for consumptive persons. You may form an idea in general of those families where the consumption becomes hereditary; they are generally of a low pulse, as the pulse depends some on the motion of the heart, you may from this feel the force of the heart; but this rule is not always to be depended on, for sometimes the blood possesses too much matter, which chokes the pores and stagnates in a general point of view. This destroys the motion of the heart very much, and diseases strike in on the inside, and forms new places of discharges, sometimes by the way of the mouth, and other times it discharges in the hollow of the body.

We are to pay some particular attention to the age of these ulcers or sores, whether they be inside of the body or out; for where these humors collect and fester, they often break and begin to discharge their matter; and this has a tendency to draw more humors to the same place, and if this continues, at length it becomes a place of discharge, and nature discovering this evacuation, prepares some new channels or organs for this matter to flow along.— That this matter does not flow along the natural course of the blood vessels by opening the wounds, can be seen often either in man or beast; and by paying attention to a person that has an ulcer on the arm or leg, you can discover this discharge is not

perpetual, but a little like the discharge by stool or urine, that flows periodically or by spells; and at the time that this watery matter is forcing its way towards the place of discharge, the person will complain of pain, sometimes very sharp. These things show that it does not flow along a natural organ, but an unnatural one. If these organs are new and nature has not got a long habit of preparing substance for them, it is quite easy to break it up by lowering the fountain, that is the stomach, and by a course of medicine, which will discharge an uncommon quantity of water and matter through the pores. And as the natural organs make a stronger claim on the fluids than the unnatural ones do, by this means the unnatural organs will be left unsupplied, and in a short time will close up. But an old complaint differs from this; for although you stop this substance from flowing for a short time by robbing the fountain, and throwing off a quantity of substance through the pores, yet when the fountain gets a supply, and the pores close up measurably, nature has got such a habit of preparing a supply for these new vents or discharges, and they have been so long in use, that their claims for substance are nearly as strong as a natural organ; and unless we baffle their claims a long time, it will not be destroyed; and the patient needs patience and a close adherence to the rules to baffle these complaints. There is one more cause that makes this complaint hereditary, that is to be alarmed or frightened. There are a number of people, that when they get frightened or terrified, the blood in a degree leaves the extreme parts of the body and flows more forcibly round the heart; and wherever the blood flows the strongest, there the humor is the more apt to affect the system--for the humor flows with the blood, and there have been a

number of families in the bounds of my knowledge who have never been affected with the consumption to their knowledge, till at length one has been attacked and died. This has had a tendency to frighten the rest. Then we find that another is attacked, and also dies; by this time the rest begin to take the alarm more generally, and conclude that it is hereditary. After this, if any one of the family are taken, they are immediately alarmed, and begin to think that it is sure death; and we find that it often turns out so, until it sweeps the whole family, and even sometimes whole connexions have died with the consumption. For this reason I would advise the physicians to keep their patients as comfortable as is convenient, and encourage them as much as the nature of the case will admit, and let attendants sing and cheer the mind, and be in a lively posture. These things will assist in throwing the blood out from the heart, so as to drive the humor to the extreme parts of the body.

But there are other causes of this disease, such as the measles struck in by cold, which shuts the pores and settles on the inside; and the pleurisy has brought on the consumption, but it is in the light department, and there are various other causes, such as wounds, or breaking something in the inside, &c.

The symptoms of this complaint are so various, they are like a family of them; but I will hint at it as well as I can. There is apt to be a pain or soreness at whatever part of the body the disease is seated, and if this matter can have access to the mouth, there will be a cough and spitting of matter, or blood and matter. If this disease is seated any where in the heart department, we are apt to see some foam mixed with the spittle, and the pain or soariness will be higher up, and most apt to be seated in the

pleura, that is the flesh that is in the inside of the ribs, near the shoulder blade; and if this is the case, the patient will feel a pain strike through to the shoulder blade; and if it is in this department, the patient will be apt to be phthisicky, and more apt when they take cold, they feel a difficulty in breathing in some degree, and they are more apt to spit blood. In this species the pulse rather jerks, and is quick, as it comes from a pleurisy in the first place or bad cold. And another species of this disease is where it settles on the lungs or liver. The symptoms of this species are, a pain or soreness at the pit of the stomach, and cough up more or less matter; they are apt to feel weak spells and a low pulse---these are most apt to swell in their limbs in the last stage of the disease. Another species of this disease is when the inflammation is low down in the bowels, the person is apt to have a purging, and their pains are low down, and sometimes they are cholicky and not much if any cough, and weak feelings. Chills and fevers are a common consequence towards the last stages of consumptions of almost every species; these are the most common symptoms, besides those of a common cause, which are commonly connected with these.

In curing, avoid every species of physic as much as possible, as they have a tendency to draw diseases in on the inside, and improve the inflammation by setting the bowels to motioning faster, and the more a humor is rubbed the worse it is.

For a cure, take No. 2 of the first species, and mix your Nos. 1 and 2 together. If the patient has a cough, mix sugar with the powders. If the cough is very bad, make a sirup of them, and give the same quantity a day. When the powders are given in sirup, which may be done in severe hacking coughs,

leave your brimstone out of the powders, and mix sugar with it, and give two doses a day, besides the usual quantity of the powders in sirup. — But if they have no cough, give them without sugar, and take the patient through a regular course of medicine. If they are not too weak, begin with diet No. 1; but if very weak, begin with diet No. 2. After they have gone through one course, if they are not cured, take them through a second course, by having your No. 2 of the second species, and diet No. 2. And if they are not cured, take them thro' a third course, by having your No. 2 of the third species, with diet No. 3: And if the disease still remains, you can repeat the third course, and put a small quantity of pulverised tobacco in the medicine, as much as they can bear, without making them sick; and when you stop, gradually increase the diet, as well as gradually decrease the medicine, till well.

The Cholera.—This complaint has not yet been in this part of the country, as we are certain of— but there has been a strange cramping with the choleramorbus, that have cramped the limbs and body very much. Several such cases I have attended, and cured without difficulty. The general symptoms of the Cholera, as we have it from Europe and America, with the exceptions of puking and purging, is the symptoms of a stagnation of blood; that of a coldness in the limbs, a swimming in the head; the cramps in the limbs, a heavy feeling, &c., are sufficient evidence that it is a stagnation of blood. And as this system universally cures people of stag-nations, we need not fear but it will be a sufficient cure for the Cholera. Here I refer my reader to my remarks on stag-nations, as well as the common cause of diseases. The chokes in the body, with the

fright or terror that goes with this disease, is what drives the fluids back against the stomach and bowels. Nature finds herself choaked in stagnations of blood, and makes a number of strange motions to throw it off. There has been a number of people who have been stagnated, or in other words, had the typhus fever, and were said to be bewitched, because they acted so strange. I knew two families who were thus afflicted, and the witch doctors said they were bewitched, and described one of the neighboring women as the person each time; and thus made a great disturbance, until some of them died; and I told them that it was the typhus fever, and they employed me to doctor the rest of the families, and they were cured immediately. And as the typhus fever seems to be thought strangely contagious, by its going through families and neighborhoods, but I believe, is only catching among those whose blood is thick; so I suppose is the case with the Cholera. I could bring forward many more reasons for calling it a stagnation of blood; but these may suffice, expecting it will be closely compared. And as this system has gained universal credit in curing typhus fevers or stagnations of blood, I expect the cholera will give us another victory over the physicians of the day.

We need not be the least alarmed because the doctors have never been able to cure the cholera.—We ask, when have they cured the typhus fever? The answer by some might be, that certain persons have got well under their system of doctoring. I ask, if there has not as many, in proportion to the number, got well that never had a doctor to attend them? I honestly say, that I believe there are more. Their medicine, in this disease, is often worse than none. Of those that have been physicked severely,

there are something like one third that have died, in my judgment; and of those that have not been purged, there are not over one fifth.

The symptoms of the Cholera are generally puking and purging, with the symptoms of a common cause.

For a cure, give angellico root tea after you have placed the patient in a regular sweat; let them drink this tea during the sweat, as hot as they can; if the operation and tea does not stop it, place them in bed, cover their breath, and place a small hot stone or brick near a foot from the mouth; and continue to drop camphor on it; and let them suck this steam in with their breath; and continue this till they stop puking, or place them in the regular sweat again, at any time, till the puking stops, and then take them through a regular course of medicine, until the stagnation is finally removed; continuing to give the hot tea while breathing to the camphor; steam in bed; use Nos. 1 and 2, as usual in a regular course of medicine. I will here remark, that old stagnations of blood have to be removed very gradually, by a steady process for a considerable time. This same cure will answer every species of cholera morbus, and I have a long time believed that it would cure the milk sickness, that prevails in some parts of the western country.

Dysentery. This disease may be divided into two complaints, or rather come from two causes. I have already hinted in this work that physic draws diseases in on the bowels. There are different causes that will set a person to purging if the body is full of humor; and any thing that should set the person to purging at this time, has a tendency to draw the humor in on the bowels—sometime too free a use of fresh meat has this tendency; at other times a sud-

den cold, & sometimes a large draught of cold water when the person is warm. But as the two species of flux amount to but one thing in the end, I will here detail the other cause, which is the most dangerous; it comes in hot weather; persons frequently by exercising themselves too much in hot weather, bring on them what is called the heat; so, if a person gets hot enough to inflame the blood this way, and at this time take cold so as to shut the pores, this will frequently drive this inflammation or heat in on the inside of the bowels, that would otherwise break out on the surface of the skin. The night air has this tendency, coming on us when we are very warm or lying too cold of a night after being very warm in the day, or a cold damp shower of rain at this time, These, with other things, have this tendency; humors are alike, whether they are outside of the body or in; the more we rub them the more they become inflamed; and a purge at this time sets the bowels in motion; this augments the humor, and the inflammation is worse; so, the less purging that a person can do with is the better during the complaint.

The most common symptoms are a purging, and a kind of matter comes with the stool; and when the ulcers get more rough, they commence bleeding, so that the blood and matter is on the stool—there are pains in the bowels and in some cases a heat.

For a cure, your No. 2 should be made of dry and driving medicines, and follow a common course, except in an operation of steam, provided you can get your patient to sweating freely without it, and this sweat must continue day and night till well; but if you cannot get them in a way of sweating without it, make use of the steam repeatedly till they get in this way—the diet might be No. 2. The No. 2 as medicine that I have made use of in general, is equal

parts of sulphur, elder bark, and wild cherry bark, and giving three or four doses of it a day. When persons have a dysentery, and there is no great quantity of blood or matter comes from them, it will be found an advantage to use diet No. 5.

Apoplectic Fit.—This disease comes from hard drink in a general point of view, but sometimes from living too much on strong diet, very fat and salt, which sets the blood in a state of fermentation and fills it with humor, which throws it up to the head with such rapidity as to overcome the person.

A cure. The patient may be first relieved by bleeding; it should be done as quick as possible, and afterwards give three or four doses a day of No. 1, without any other medicine, and regulate their diet to No. 2, for two or three weeks, and then give diet No. 3. During the first part of the time try to keep them in a moist sweat, without an operation of steam, bathe their feet often in warm water, and afterwards get them in a moist sweat once a day.

Fevers. There are some doctors that are either blind, or wish to blind others, by placing fifteen or twenty names to fevers: such as the fever and ague, the typhus fever, pleurisy fevers, fermentary fevers, bilious fevers, yellow fever, nervous fever, intermittent fever, slow fevers, rheumatic fevers, &c.

I shall consider them all under three or four heads. But I find fault with the title as a complaint, for I believe that it is the way that nature resists complaints that is by a fever. This is one of the best arguments made use of by Dr. Samuel Thompson. If he was the first person that found out that a fever was no complaint, he deserves credit; but I have been in a doubt whether he was the first or not. I think not less than eighteen years ago my father mentioned

to me that some doctor had made this discovery, though I do not remember the name, whether it was Thompson or not; but as it was years before the date of his patent, it does not look likely that it was him. I recollect of my father stating that this doctor cured with domestic medicines, that were not poison. I then fell in with this opinion, and have remained so since. We may discover that wounds, bruises, sores, burns, and the like, throw people into a fever; but cure the complaint and the fever ceases.

The next complaint of this kind I shall mention, is the fomentary fever. The cause of this complaint is generally a foul stomach; it is most apt to happen to people of a full habit, whose blood is humorish. This filth creates a heat in the stomach, and this heat spreads all over the person; this shuts the pores of the body, and the fluids that should be discharged this way, are confined within the body; and sometimes these fluids pass off either by stool or urine. Now the doctors instead of opening the pores, frequently increase the discharge by stool; this draws the substance back towards the stomach, and of course the filth with it, which is apt to make the patient very sick; for nature, instead of throwing her substance toward the skin, where it ought to be discharged, it is now forced back on the stomach, and this sometimes is repeated; and if this does not answer, sometimes they administer a poisonous emetic, which not only throws this substance back contrary to nature, but is apt to leave some of that poison in the body. But the question is, what shall be done in this case? I answer, what does nature demand? Is she tired of her load on the stomach? If she is, she will make motions to throw it back by the mouth. If this is the case, you can assist her by administering No. 3. and clearing the stomach this way, and

continue a regular course of medicine. Let the diet be No. 1, for three days, and so gradually rise till they get well, which is not apt to be long. If the patient does not make motions to puke, you can begin by giving a dose of No. 1, and then sweat, and so follow the regular course of medicine.

The symptoms of the above complaint are as follows; the patient is thrown into a high fever, and has a high pulse, often a pain in the head, and a sick stomach, and often has a load on the stomach, sometimes casting up a sourness in the mouth.

The next I will call stagnated complaints, because they come from a stagnation of blood. I expect to cope under this head what is called the cold plague or typhus fever, stagnated fits, nervous fever, palsey, cholera, the third day ague, the slow fevers, bold hives, the spotted fever, bilious fever, common ague, rheumatisms, &c.

I will refer my reader to my general remarks on stagnations of blood as the cause of these complaints in a greater or less degree, and the reason why it throws people into so many kinds of fevers with other complaints, is in proportion to the stagnation, and where it lodges in the body. When it lodges near the nerves, it becomes nervous; when it stagnates generally, it becomes typhus or a cold plague; when it settles near the skin, it becomes dropsical; when it does not settle at all, but occasionally thrown off by fever, it becomes a paroxysm or an ague; when it lodges in the limbs, it becomes rheumatic. I have stated in my general remarks that there is too much matter in the blood, that causes this stagnation of blood. In a stagnation of blood, it is entirely too dangerous to bleed the person; and when we do try to bleed, the lancets frequently strike on the matter part of the blood, and if so, the blood does not run

free, and often when it does run, it chokes in the vent with the same matter.

For a Cure—A regular course of medicine.

Yellow Fever.—I have doctored but one case of this complaint, but I conclude that I know the cause of the yellow fever. I suppose as it generally prevails most in warm climates, that it is the gall of the stomach with the filth of the blood in a state of discharge gets choked in the pores either by cold or too great a quantity of matter in the blood, or some other cause; and as the natural color of this substance is yellow, it turns the person's skin the same color. I have known a number of person's whose skin was turned yellow by the jaundice, and some by fevers, and I have opened a free discharge from the pores of the skin and given them diet No. 1, and the color has been altered in three days. So I suppose that a regular course of medicine would cure this complaint.

Scarlet fever comes from humor in the blood, and nature aims to throw it off by the glands of the throat, and the worst danger is while the throat is swelled, before the humor comes out so as to be seen.

The symptoms of this complaint, are a sore throat; and at length they break out with a red humor like scarlet, and it goes off frequently by the patient peeling all over or in part.

For a curé, make use of No. 2, of sulphur and elder bark, and take a course of medicine, and place plasters on the bottom of the feet, and across the soles and back to draw the humor away from the throat.

Convulsion Fits—If the patient is dangerous, bleed in the foot, and after frequently bathing the feet in warm water, take a regular course of medicine by leaving out No. 2, & give three doses a day of No. 1.

Stagnated Fits.—The cause of this disease I will cite the reader to my remarks on a stagnation of blood; and the reason that it operates differently on these people, is the formation of the head, the blood has not the same room to circulate round the brains as it has in others when there is an over stock of blood in the head, as is the case in such stagnated complaints; because it stagnates in the feet first, and the heart throws it up to the head, because it cannot flow freely to the feet. Although the fit itself baffles the stagnation in part, for nature takes this way to force a circulation of blood, but as there is too great a quantity of surplus matter in the blood, it stagnates again, and so continues as long as the blood is in this state.

The symptoms of this complaint is in a great degree like all other stagnations of blood. At the time when the blood stagnates in the feet, and the feet gets cold, then the heart throws blood up to the head with too great a rapidity, and thus overcomes the brain, and a fit is the consequence; the person feels heavy cold chills, sometimes numb and stretchy, with other symptoms of stagnation of blood; and the plainest evidence of a stagnated fit is, that the feet are cold in the time of the fit.

This disease, when it is old, is very hard to cure, and needs patience and attention both of the physician and patient. If it was not that some will look for something to be said on this subject, I should leave this disease out of my list; but as the public know that I have cured a few of this disease, and others frequently applying, I hereby give my views in a short manner, for the want of room to pursue the subject further. I am perfectly satisfied that if this disease is taken while young, there will be no difficulty in curing by a regular course of medicine; but

it is the age of the complaint that makes it constitutional, and that makes it hard to cure. If this disease attacks a person at any time before they get their growth, they ought to try to have it removed before they get their set, lest it be interwoven in their constitution, which will make it hard to cure. I find it very hard with some to throw off a stagnation of blood without bringing on them a convulsion fit, which may be said to be opposite to the other. Yet I have found it no serious point to stop the blood from stagnating in any person. But whenever it circulates freely in some, they take a convulsion fit, and to strike the centre ground between these I find it to be difficult.

For a cure, make your No. 2 principally of sulphur and sassafras; take a regular course of medicine; let your diet begin with No. 1, and after three days No. 2 for at least two weeks. If the stagnated fits continue, you can repeat your regular courses of medicine, and add a small portion of prickly ash bark or ginseng with your No. 2; and if your patient's blood quits stagnating, and they continue to have fits, you must stop your medicines, except one dose a day of No. 1, and give two doses a day of No. 5, and the diet should not exceed No. 4, till the disease wears out, which may be a long time. The patients should exercise themselves steadily, but not to extremes, especially if they are subject to convulsion fits. Let the patient wear flannel, if convenient, next to the skin, and dress warm and lie warm of nights, and get into a free sweat once a day. By some means their diet should be very fresh, and not much animal food, with a watery diet, which might be sweetened as much as they please. They might make a free use of hickory bark lie during the whole time; and after they have done their courses of medi-

cine, leave No. 1 out, and use no other medicine only one or two doses a day of No. 5 with the lie, except the stagnation should return, and if so, by regular courses of medicine at intervals.

Gravel.—This disease comes from two causes; one is, too much matter in the blood. This comes on people who use a great deal of salt and meat in their diet—that creates matter in their blood. These lumps of matter sometimes have lodged in the arteries, and have become stones, (if accounts be true, which look probable,) which have been found both in men and beasts, as well as in the bladder, and they have a growing tendency; the other cause is detaining the water in the bladder too long at a time at different times, while the thick part gathers into bodies, and so congeals into a hard substance, and remaining in the water, at length becomes a stone, and has also a growing tendency. There are other causes that create matter in the blood, such as hard drink, for one evidence is that it improves the flesh on them; another is, that spots and cloudy places are seen in their face. I have not named these things as the cause of this disease, because I thought I could cure it, but more to keep people from bringing the disease on them; for with me this is one of the incurable complaints, though sometimes it may be abated so that the patient may have some ease for a while.

Symptoms are as follows:—If it has come from too much matter in the blood, there will be symptoms of stagnation as have been described; but the common symptoms are sometimes that the patient feels a kind of grinding in that part of the body and a stoppage in the water, either in the commencement or towards the close of making water, and sometimes during the whole time, which makes it quite difficult to make water, and their calls to make water are

oftener than usual, and sometimes tingured with blood.

I have received receipts to cure it, which have been recommended as a sure cure, that the practitioner can try. They are inserted here as a cure.

Receipt for the Gravel.—Take the root of what some call the queen of the meadows, or what others call the seven sisters, because there are sometimes seven stocks growing from one root; the stocks sometimes grow as high as a man's head, and four or five leaves grow out of the stocks opposite each other, and the stocks are hollow; powder the root of this weed, and take three fourths of it, and one fourth of angellico, mix these together, and take a half tea spoonful every two hours, and live on diet No. 2. till cured; and then gradually increase your diet; keep up a moist sweat as steady as possible.

Dr Read's cure for the Gravel—Take horse mint and onions; bruise them together; take of the juice one table spoonful; put it in one gill of strong vinegar; take this portion night and morning till well.

The sick headache.—There are several causes that produce this complaint; one is, an over sour in the stomach; another is, something that we eat stops up the canals or the vents of the stomach, so that the watery substance that ought to pass out into the blood is now thrown up to the mouth. These, with other causes, throw the blood up to the head. I have been plagued with this disease from a child; then I was attacked once or twice a week on an average, and it has followed me all my life, and I have always been trying new cures till about five years ago. I have not room in this work to mention the cures and their effects. Between five and six years ago I took a severe cough, and spit blood with abundance of matter, and had other symptoms of a

consumption, and I took a regular course of medicine and regulated my diet with a great deal of precision—and after this it was near six months at one time that I was without a headache, and since that time, I have found regulating the diet was the best remedy for the sick-headache. I have been from one week to three months at a time without it since, and would have been longer, but circumstances have called me to changes of business, and also to changes of diet, which have brought it on me at times, tho' the cough did not last two months, and I have had no symptoms of it since, which has been near six years.

I have found that drinking warm water repeatedly during the time, even if it is puked up again, gives ease to the head; by keeping fast from food, and keeping up a moist sweat, is a great relief for the headache.

The gout might be mentioned here, but I will cite my reader to my remarks on a stagnation of blood for the symptoms and cure.

King's Evil comes from nearly the same cause of the gout, though it may come from less excess in drink and diet. I do not know that it can be cured, though it may be eased by living on light diet and taking some doses of No. 1.

Receipt for the King's Evil.—Dr. Ward's Cure.—Take the thigh-bone of a horse, burn it to lime, and sift it through a fine sieve, mix it with butter-milk, apply it to the place till well; give doses of No. 1 repeatedly.

Receipt for a Cancer.—Take copperas; burn it on a thin shovel till it heaves up white; then powder it fine; mix it with goose grease, till it becomes a salve; make a plaster on paper as large as a dollar; and shave the hair off on the open of the person's head; apply the plaster to that part once a day, for three

days; then take them off; take a pinch of red precipitate; mix it with fresh butter; anoint around the cancer; and physic with the second species of No. 4, during the time; then close the process with bleeding the person.—*Doct. Ward.*

Measles.—For the want of managing this complaint right, it frequently brings on the consumption and a number of other complaints; sometimes takes the person off immediately, and others carry the effect with them as long as they live. It creates humor in the blood, and does not discharge it like the small pox by means of sores, but the humor strikes back into the body or else settles in the inside; very little medicine and management taken in time will answer the purpose. When you first discover that any person has the complaint, give some doses of No. 1, and get them into a moist sweat once a day if convenient; let them take two doses a day of No. 2, according to the patent, and let their diet be No. 2; but if the disease is unwilling to come out, or has been out and got struck in again, you may sweat them freely.

Mumps.—Let the patient be dressed warm and lie warm, and exercise as much as convenient; take two doses of No. 1 a day; drink smartly of spice bush tea; let the diet be No. 2, till they get better, and then No. 3, &c.

Dropsy in the blood.—There are two causes, one is the stagnation of the blood, which weakens the motion of the heart as well as obstructs the pores of the body with what is called the crassamentum or matter of the blood; another cause is a loss of blood by bleeding or wounds, which not only draws the red part of the blood off faster than the matter part but weakens the force of the heart, so that it is not able to open the pores and discharge the water from

the blood. These remarks may suffice, as I have already mentioned a stagnation of blood.

For a cure, take a regular course of medicine, give a few doses of No. 5 in the course of the time. I have cured several, and found it no difficulty. I have concluded that a dropsy in the body sometimes originated from the same cause, and will be cured by the same means.

A dropsy in the head.—The cause of this disease is as follows: It comes from living on strong diet, with too free a use of salt, or hard drink, or any cause that raises the blood to the head too long at a time with too much severity, till the organs get habitually prone to leaking water or matter.

The diet should be regulated to No. 3, or, at furthest, to No. 4; make a free use of snuffing tobacco, and get into a moist sweat once a day by some means, and take a few doses of No. 2 during the time. By continuing this course a long time, the disease will be apt to wear away.

Rheumatism.—The cause of this complaint I will cite the reader to a stagnation of blood in a general point of view; but though the blood is too thick, yet the person is not sure to feel the complaint till they take cold; and so it is with certain species of typhus fever. When the rheumatism settles all over the body, it acts very much like the typhus fever; when it settles in parts of the body, it has smaller symptoms of the typhus fever. When the matter of the blood shuts the pores in certain limbs or parts, they swell by the water coming against the skin and have no vent. This species of rheumatism is easier cured by a regular course of medicine than the other, that is, where the matter settles on the cords or joints, it then is harder to remove. Relief may be given, and sometimes cured, by applying a plaster of No. 6

to the place, but the surest way of curing is a regular course of medicine.

The flying rheumatism is produced by a stagnation of blood, and is cured in the way we cure all stagnations.

Rheumatic Drops. Take Indian turnip, red pepper and old whiskey, with a small quantity of gum myrrh, till it is very strong, bottle up for use, bathe morning and evening by the fire, wrap the part in flannel warm through the intervals.--*Doct. Ward.*

Pleurisy — The cause of this disease is a cold in the lights. When people have been breathing in warm air, or receiving warm steam into the heart from drinking warm teas, or any other means, and then immediately receiving cold air to extremes, these sometimes contract cold in that department of the body which often swells the lights, and sometimes affects the pleura, that is the flesh that is joining to the ribs in the hollow part of the body near the point of the shoulder, where the pain is most apt to be felt, though sometimes it affects other parts in the same department; and at other times cold is carried into the blood, and so affects the whole system; or the cold may impress on the outside of the body and shut the pores till it may be called a pleurisy.

The symptoms of this disease are as follows: If the lights are swelled, they generally breathe hard; sometimes a pain every breath, either in the breast or shoots toward the point of the shoulder—sometimes all over. The symptoms of a pleurisy and a typhus fever are very nigh alike; the most sensible difference is, the typhus fever may be felt days before it comes on or lays the person up; and the pleurisy comes more sudden. The heavy weight that is felt in the typhus is not so sensibly felt in the pleurisy, and the typhus is not so apt to swell the lights

or cause the person to breathe hard as the pleurisy.

For a cure.—This is one of the complaints that is easier cured than any other, or done sooner by giving a dose of No. 1 and No. 2 in the course of half an hour of each other, and then take the person through a regular sweat for about thirty minutes, generally cures by putting them to bed and covering them, so that the sweat does not stop too sudden, or any way so that the sweat ceases moderately—if they set by the fire or stir about, provided they are warm enough. To continue the sweat a short time I have generally cured people of this complaint in the course of an hour from the time I commenced to sweat them. If the practitioner should find that his patient was not cured in the above time, he may just conclude that the complaint is typhus, and he has lost no time, he can continue on according to the rule laid down for that complaint.

Stone bruise and felons.—These complaints come from a bruise that stops the blood vessel next to the bone, and as the water part of the blood is confined, and all the time increasing, it must have vent; and as it raises from next the bone, it sometimes injures the bone before it gets vent. The best means is to lance the place as soon as we find it out, and let the water out, and it commonly gives relief by lancing to the bone.

Lockjaw comes from thick blood in a general point of view. When a person whose blood is thick receives a wound which affects some cord that has access to the jaws, then it takes a set, by the blood being thick that surround it.

For a cure, put the person all over in warm water till it comes up to the mouth, for not exceeding five minutes at any one time; rub and bathe them in the meantime all over, and particularly the jaws.—

These processes may be repeated several times, or take them through a regular sweat by giving a dose of No. 1.

Cramps is another disease that takes place from the same cause of the blood being thick, and may be cured by the same means for a present cure; but to remove the cause, you must thin the blood for either of these diseases.

Piles is a disease that I am not confident can be cured, yet I suppose they may be relieved for a time. To relieve a person in this disease, make a medicine of elder bark, leaves or flowers, with one half sulphur, and let them take repeated portions for a day or two, and at the time inject a solution of it up in their bodies several times; this will commonly relieve them for a while, and to keep as clear of it as possible, let them live on a weak, watery diet, or a vegetable food.

Receipt for the Piles.—Take red cobs and pound them fine, about two double handsfull; put them in a keg without heads, set fire to them, and sit on the keg naked until the cobs are burned out; repeat this four times in a night.

For old Ulcers or Phthisic.—Take the bark from the roots of yellow poplar, wild cherry and dog wood, put the bark in water till made strong, and boil it half away, then strain it, and bottle it for use; take a glass morning and evening.

A Consumption sirup.—Take medicine Nos. 1 and 2, with one fourth spiknard powders, and put them in a bottle and sweeten them with sugar till it is a weak sirup, and shake your bottle before you drink each time, drink of it three or four times a day; throw yourself into a sweat once a day by some means; dress warm, and lie warm of nights, and live on diet No. 3.

These simple means will generally have a good effect, and sometimes remove the whole disease.

Scald head.—This disease comes from humor in the blood, which sometimes comes into the world with a child. This humor settles on this part of the body, and is easily removed if taken in time, but it is like all other diseases; if it is not removed it becomes constitutional, and age makes it hard to cure.

For a cure, make a solution of two thirds elder bark, flowers or leaves, powdered, and one third sulphur, put but a small quantity of water with them, so as to leave them as strong as possible; make a cap of thin leather, or any other thing that will keep the air entirely out, and wet the inside of the cap with this solution three times a day, with a small portion of the spirits of turpentine, enough to scent the cap, and let the patient wear this cap till well; let their diet be No. 2 for two or three weeks, and then No. 3 till well. The patient should take one or two doses of No. 4 a day, and get into a moist sweat once a day by some means. They ought to dress warm and lie warm of nights. I have cured but few cases of this disease, but what trials I have made has had the effect to convince me that the disease is curable. But after a person is cured of this disease, they ought to live on a light, fresh, vegetable diet for a season, to keep the disease from returning. When people commence this process, it would be as well to cut their hair off or clip it, and during the time it would be proper to wash the cap once or twice a week.

Humors in the Feet.—When I was from fifteen to twenty years old, I had humors in the feet towards the fall of the year, for every year till I was twenty.

one, and I was told to wrap up my feet in green elder leaves, and as fast as they dried, apply new ones; and I did so, and found relief immediately. — Since that I have told others of this way of curing, and they have done so, and have generally been cured. The patient should have a pair of stockings on and stuff the leaves in them round the feet.

Sore Eyes.—For a cure, make powders of equal parts of eider and sulphur, and a small portion of copperas; mix these together, and put them in a bottle, and put a small quantity of water to them, so as to leave them strong, and let the patient wash their eyes with this water two or three times a day. If the eyes have been a long time sore, and appear to be hard to cure, you may give them diet No. 2; or at most No. 3, during the time. These means will generally cure without fail.

Flooding.—This Disease comes from two or three causes, but most generally from a stagnated blood. If it is produced from this cause, the person will feel symptoms of stagnation, and the blood, when it flows, will be unmixed in a degree, and have the appearance of other stagnated blood that is drawn from the body by bleeding any other way; the other cause is, the blood is unusually thin, or perhaps a sore or ulcer in that part of the body.

For a cure, take two or three doses a day of No. 5, and let the diet be No. 3; and at the proper time, when this disease has gone off, or between the natural courses, then take them through a regular sweat for the purpose of mixing the blood; one or two sweats at an interval of a day apart, will be found essential when it is caused by a stagnant blood; but if it is produced from the blood being too thin, it is only necessary to give the above quantity of No. 5, and regulate the diet to No. 3, and place a large

plaster of No. 6 between the shoulders, which ought to be done in each case to draw the disease from that part of the body. I have attended to a number of persons who were afflicted with this disease, and it has generally had a good effect, though the subject is too delicate to pursue it in this piece as far as it ought to be done.

I have wrote a piece on the subject of Midwifery, but it is borrowed from other books, and corresponds with the balance of this work; but as these books may be used by people who would not make good use of that part, I have concluded not to put that part in every book.

Worms.—There are three or four species of worms, and what will cure one will make another worse. I will name the most common species; one is the long, red worm that is frequently in the stomach and bowels, not only of children but also in grown persons.

The way to kill these worms:—These worms may be taken off sometimes by large doses of castor oil or a quantity of weak lie. to be taken repeatedly for some days, and use diet No. 2. I have thought that if poison was ever of any use as a medicine, it is to poison these worms to death, as there is a probability of poisoning them, and not injuring the person much, though it will leave some poison in the blood. The way to poison these worms is to give some sugar, about twenty or thirty minutes before you give the dose of poison; your dose of poison may be carlina pink root, a common dose of it, or an even teaspoonful of copperas for a child three years old, and more if the person is older, or less if they are younger. Some make use of a small quantity of Mayapple root; but whatever poison is used, mix it with sugar—these ought to be worked off with fresh broths,—

But these worms are not very dangerous, only when they choke the person by getting in bunches and getting in the pipes. But these means makes the little stomach worms worse, and this species of worms are more dangerous than the others, and they are apt to improve with bad blood, and get better as the blood is cleansed. For this species of worms give two or three doses of No. 4 a day, by putting them in warm water or tea about fifteen minutes before they are taken, and sweeten them as mentioned before, and the diet ought to be lowered if convenient, and get the person into a moist sweat once in a day if possible.

For Worms.---Take a tea spoonful of tobacco seed three times in a day, with honey or molases; do it three days in succession.

A cure for white swelling.---Take mercurial ointment and rub the part effected; at the same time have a preparation for bathing, made of chesnut bark, shumach bark, near the root, rattle root, boil them together, bathe the part effected, take flannel cloths, and dip them in it, and apply to the part as warm as they can be born during an hour or two: then make a poultice of cammomile. mullen, catnip, and flaxseed; bathe twice in a day; likewise, apply the poultice immediately after bathing.

White swellings may be cured, either altogether or for a while, by applying No. 6 to the place till it gets well, and regulate the diet to No. 2 for a week, and then No. 3 till well.

Weak Stomach.---Take two quarts of cider vinegar, put it in a stone jug, take hoarhound tops, horse radish root one handfull; then bury it in the ground for twelve days; take a tea spoonfull three times in a day before eating.

Receipt for the Tetterworm.---Take fresh butter

and put coppers or cents in it; keep it warm and stir it till it turns green; about twenty-five coppers to the half pint. When it is thus made, bathe the part diseased every few days, and keep the part dry if possible.

Another cure is to take the buds of the balm of gilliad, mash them well, soak them in fresh butter, and apply to the part, and keep it dry.

A cold bath may be applied to advantage in a great number of low stagnated complaints, as it seldom has a bad effect when applied right.

The way to apply a cold bath is, either emerse the person in cold water, or pour it on them, they being naked or nearly so; then put them to bed, cover them warm, and also cover their breath a short time; give some warm teas, which generally produces a sweat, then gradually take the clothes off them, and have them dressed warm between these processes, which may be as often as once a day, or to suit the circumstances. It is entirely a safe operation.

A simple wet fire or costic to burn out cancers and the like, or to destroy proud flesh:—Take pearl-ash and dissolve it with the oil of vitrol, or mix the oil of vitrol with pearlash till it is soft enough to run in the place so as to penetrate to the bottom of the sore or cancer, and when you wish to stop it, fill the place with sweet oil.

SURGERY.

Broken bones, limbs &c.—As I do not profess surgery, I will make but a few remarks on that subject. I have discovered a great lack in surgery, in giving directions and medicines to their patients in such cases. It should be strictly understood, that nature is the grand physician to cure bones as well as the flesh, that when a bone is broken and set by any per-

son, the diet should be regulated and the blood calmed by proper means to keep the wound from inflaming or getting humorish, which will be a means of preventing mortification with other consequences. This great lack may not be universal, but it prevails to a great extent. I would rather venture a common skilful person to set a bone by feeling round the limb to place the bones together, and give proper directions for medicines and diet, than to venture a professed doctor to do it, and give no directions to regulate the blood.

Directions for broken bones, bruises, &c. Give three doses a day of No. 1, and see that the patient is got into a moist sweat once a day. When a bruise is first received, bathe the part in cold vinegar and salt, or cold water, rubbing the part severely for 30 minutes, and if very bad, bleed the person as near the wound as convenient, and as soon as possible; and after an hour or so, warm your vinegar and dissolve salt in it as long as it will dissolve, and bathe the part repeatedly with it as hot as they can bear it, and at intervals keep a cloth wet with it applied to the place. This should be done whenever we suppose there is bruised blood in the system from wounds and the like; get the person into a moist sweat and keep it up as steady as possible to keep off inflammation, and if inflammation has ensued, follow the same rule if the bone is broken. You may apply these means without rubbing that part after the bone is set.

If you undertake to set a bone or joint that has slipped, first apply warm water around the place to loosen the cords, then place your bones by feeling around; give diet No. 2 during the whole time till the difficulty or danger is over; then rise to No. 3 till well. Apply medicine No. 6 to the place, or as

near it as possible, during the time. A bone ought to be kept very still till it has time to knit together. If the wound should be such as to confine the patient so that they cannot exercise, they ought to have a dose or two of castor oil to keep the bowels regular in their discharge. These directions may be applied to all the receipts for wounds that are in substance. The following are taken in part from McKenzie's Receipts.

If, in consequence of a broken bone or other injury, the patient is unable to walk, take a door from its hinges, lay him carefully on it, and have him carried by assistants to the nearest house. If no door or sofa can be procured, two boards, sufficiently long and broad, should be nailed to two cross pieces the ends of which must project about a foot, so as to form handles. If in the woods, or where no boards can be procured, a litter may be formed from the branches of trees. In this way a hand-barrow may be constructed in a few minutes, on which the sufferer may be properly carried.

If he has been wounded and bleed's, the bleeding must be stopped before he is removed.

"Having reached a house, lay him on a bed, and undress him with care and gentleness. If any difficulty arises in getting off his coat or pantaloons, rip up the seams, rather than use force. This being done, proceed to ascertain the nature of the injury.

"This may be either simple or compound; that is, it may be a contusion or bruise, a wound, fracture, or dislocation, or it may be two or all of them united in one or several parts.

A contusion is the necessary consequence of every blow, and is known by the swelling and discoloration of the skin.

Wounds are self-evident.

Fractures are known by the sudden and severe pain, by the misshapen appearance of the limb, sometimes by its being shortened, by the patient being unable to move it without excruciating pain, but most certainly, by grasping the limb above and below the spot where the fracture is supposed to exist, and twisting it different ways, when a grating will be felt, occasioned by the broken ends of the bone rubbing against each other. If the swelling, however, is very great, this experiment should not be made until it is reduced.

Dislocations, or bones being out of joint, are known by the deformity of the joint when compared with its fellow, by the pain and inability to move the limb, by its being longer or shorter than usual, and by the impossibility of moving it in particular directions.

The most serious effects, however, resulting from contusion, are when the blow is applied to the head, producing either concussion or compression of the brain."

"Concussion of the Brain."

"Symptoms.—The patient is stunned, his breathing slow, drowsiness, stupidity, the pupil of the eye rather contracted, vomiting. After a time he recovers.

"Treatment.—Apply cloths dipped in cold vinegar and salt to his head, and when the stupor is gone, bleed him and open his bowels with epsom salts. He should be confined to bed, in a quiet situation, and every measure taken to prevent an inflammation of the brain, which, if it comes on, must be treated by copious bleeding, and bathe with vinegar and salt.

"Compression of the Brain."

"Symptoms.—Loss of sense and motion, slow, noisy and laborious breathing, pulse slow and irregu-

lar, the muscles relaxed, as in a person just dead, the pupil of the eye enlarged and will not contract even by a strong light, the patient lies like one in an apoplectic fit, and cannot be roused.

“Treatment.”—Shave the head, and if possible, procure surgical assistance without delay, as there is nothing but an operation that can be of any avail.”

For management, see 104th page.

“Of Wounds.”

“Wounds are of three kinds, viz: incised, punctured and contused; among the latter are included gun-shot wounds. The first step in all wounds, is

“To stop the bleeding.”—If the flow of blood is but trifling, draw the edges of the wound together with your hand, and hold them in that position some time, when it will frequently stop. If, on the contrary, it is large, of a bright red color, flowing in spirits or with a jerk, clap your finger on the spot it springs from, and hold it there with a firm pressure, while you direct some one to pass a handkerchief round the limb (supposing the wound to be in one) above the cut, and to tie its two ends together in a hard knot. A cane whip-handle, or stick of any kind, must now be passed under the knot, (between the upper surface of the limb and the handkerchief) and turned round and round until the stick is brought down to the thigh, so as to make the handkerchief encircle it with considerable tightness. You may then take off your finger, if the blood still flows, tighten the handkerchief by a turn or two of the stick, until it ceases. The patient may now be removed (taking care to secure the stick in its position) without running any risk of bleeding to death by the way.

For management, refer to page 104.

“As this apparatus cannot be left on for any length

of time, without destroying the life of the parts, endeavor as soon as possible to secure the bleeding vessels, and take it off. Having waxed together three or four threads of a sufficient length, cut the ligature they form, into as many pieces as you think there are vessels to be taken up, each piece being about a foot long. Wash the parts with warm water, and then with a sharp hook, or a slender pair of pincers in your hand, fix your eye steadfastly upon the wound, and direct the handkerchief to be relaxed by a turn or two of the stick; you will now see the mouth of the artery from which the blood springs; seize it with your hook or pincers, draw it a little out, while some one passes a ligature round it, and ties it up tight with a double knot. In this way take up in succession every bleeding vessel you can see or get hold of.

“If the wound is too high up in a limb to apply the handkerchief, don’t lose your presence of mind, the bleeding can still be commanded. If it is the thigh, press firmly in the groin; if in the arm, with the hand or ring of a common door key, make pressure above the collar bone, and about its middle against the first rib which lies under it. The pressure is to be continued until assistance is procured, and the vessel tied up.

“If the wound is on the head, press your finger firmly on it, until a compress can be brought, which must be bound firmly over the artery by a bandage. If the wound is in the face, or so situated that pressure cannot be effectually made, or you cannot get hold of the vessel, and the blood flows fast, place a piece of ice directly over the wound, and let it remain there till the blood coagulates, when it may be removed, and a compress and a bandage applied.

For management, cite to page 104.

Incised Wounds.

By an incised wound is meant a clean cut. Having stopped the bleeding, wash away all the dirt, &c. that may be in it with a sponge and warm water, then draw the sides of the wound together, and keep them in that position by narrow strips of sticking plaster, placed on at regular distances, or from one to two inches apart. A soft compress of old linen or lint may be laid over the whole.

“Should much inflammation follow, remove the strips, sweat and bathe the patient with salt and vinegar (who should live very low, and be kept perfectly quiet) according to the exigency of the case. If it is plain that matter must form before the wound will heal, apply No. 6, until that event takes place.

“Although narrow strips of linen, spread with sticking plaster, or No. 6, form the best means of keeping the sides of a wound together, when they can be applied, yet in the ear, nose, tongue, lips, and eye-lids, it is necessary to use stitches, which are made in the following manner: Having armed a common needle with a double waxed thread, pass the point of it through the skin, at a little distance from the edge of the cut, and bring it out of the opposite one at the same distance. If more than one stitch is required, cut off the needle, thread it again, and proceed as before, until a sufficient number are taken, leaving the threads loose until all the stitches are passed, when the respective ends of each thread must be tied in a hard double knot, drawn in such a way that it bears a little on the side of the cut. When the edges of the wound are partly united by inflammation, cut the knots carefully, and withdraw the threads.

From what has been said, it must be evident that

in all wounds, after arresting the flow of blood, and cleansing the parts, if necessary, the great indication is to bring their sides into contact throughout their whole depth, in order that they may grow together as quickly as possible, and without the intervention of matter. To obtain this very desirable result, in addition to the means already mentioned, there are two things to be attended to, the position of the patient and the application of the bandage. The position of the patient should be such as will relax the skin and muscles of the part wounded, thereby diminishing their tendency to separate.

A common bandage of a proper width, passed over the compresses moderately tight, not only serves to keep them in their place, but also tends by its pressure, to forward the great object already mentioned. If, however, the wound is so extensive and painful that the limb or body of the patient cannot be raised for the purpose of applying or removing it, the best way is to spread the two ends of one or two strips of linen or leather with sticking plaster which may be applied in place of the bandage, as follows: attach one end of a strip to the sound skin, at a short distance from the edge of the compress, over which it is to be drawn with moderate firmness and secured in a similar manner on its opposite side. A second or third may, if necessary, be added in the same way.

Punctured Wounds.

"These are caused by sharp pointed instruments, as needles, awls, nails, &c. Having stopped the bleeding, withdraw any foreign body, as part of a needle, bit of glass, &c. that may be in it, provided it can be done easily; and if enlarging the wound a little will enable you to succeed in this, do so. Though it is not always necessary to enlarge wounds

of this nature, yet in hot weather it is a mark of precaution, which should never be omitted. As soon as this is done, pour a little turpentine into the wound or touch it with caustic, and then cover it with No. 6. This practice may prevent lock-jaw, which of this is but too frequent a consequence of wounds description.

"Contused Wounds."

"Wounds of this nature are caused by round or blunt bodies, as musket balls, clubs, stones, &c. They are in general attended but by little bleeding; if, however, there should be any, it must be stopped. If it arises from a ball which can be easily found and withdrawn, it is proper to do so, as well as any piece of the clothing, &c. that may be in it; or if the ball can be distinctly felt directly under the skin, make an incision across it, and take it out, but never allow of any poking in the wound to search for such things; the best extractor of them, as well as the first and best application in contused wounds, proceed from what they may, being a soft bread and milk poultice.

If the wound is much torn, wash the parts very nicely with warm water, and then (having secured every bleeding vessel) lay them all down in as natural a position as you can, drawing their edges gently together, or as much so as possible, by strips of sticking plaster, or stitches if necessary. A soft poultice is to be applied over the whole, or No. 6.

"Wounds of the Ear, Nose, &c."

"Wash the parts clean, and draw the edges of the wounds together by as many stitches as are necessary. If the part is even completely separated, and has been trodden under feet, by washing it in warm water, and placing it accurately in the proper place by the same means, it will adhere."

"Wounds of the Scalp.

"In all wounds of the scalp it is necessary to shave off the hair. When this is done, wash the parts well, and draw the edges of the wound together with sticking plaster. If it has been violently torn up in several pieces, wash and lay them all down on the skull again, drawing their edges as nearly together as possible by sticking plaster, or if necessary, by stitches. Cover the whole with a soft compress, smeared with some simple ointment, or No. 6.

For management, refer to page 104.

"Wounds of the Throat.

"Seize and tie up every bleeding vessel you can get hold of. If the wind-pipe is cut only partly through, secure it with sticking plaster. If it is completely divided, bring its edges together by stitches, taking care to pass the needle through the loose membrane that covers the wind-pipe itself. The head should be bent on the breast, and secured by bolsters and bandages in that position, to favor the approximation of the edges of the wound."

"Wounds of the Chest.

"If it is a simple incised wound, draw the edges of it together by sticking plaster, cover it with a compress of linen, or No. 6, and pass a bandage round the chest. The patient is to be confined to his bed.

"Should it be occasioned by a bullet, extract it, and any pieces of cloth, &c. that may be lodged in it, if possible, and cover the wound with a piece of linen smeared with some simple ointment, or No. 6, taking care that it is not drawn into the chest. If a portion of the lung protrudes, return it without any delay, but as gently as possible."

"Wounds of the Belly.

"Close the wound by strips of sticking plaster, and stitches passed through the skin, about half an inch

from its edges, and cover the whole with soft compress, secured by a bandage."

"Should any part of the bowels come out at the wound, if clean and uninjured, return it as quickly as possible; if covered with dirt, clots of blood, &c. wash it carefully in warm water previous to so doing. If the gut is wounded, and only cut partly through, draw the two edges of it together by a stitch, and return it; if completely divided, connect the edges by four stitches at equal distances, and replace it in the belly, always leaving the end of the ligature projecting from the external wound, which must be closed by sticking plaster. In five or six days, if the threads are loose, withdraw them gently and carefully."

For management, see page 104.

"Wounds of Tendons."

"Tendons, or sinews, are frequently wounded or ruptured. They are to be treated precisely like any other wound, by keeping their divided parts together. The tendon which connects the great muscle forming the calf of the leg, with the heel, called the tendon of Achilles, is frequently cut with the adze, and ruptured in jumping from heights.→ This accident is to be remedied by drawing up the heel, extending the foot, and placing a splint on the fore part of the leg, extending from the knee to beyond the toes, which being secured in that position by a bandage, keep the foot in the position just mentioned. The hollows under the splint must be filled up with tow or cotton. If the skin falls into the space between the ends of the tendon, apply a piece of sticking plaster, so as to draw it out of the way. It takes five or six weeks to unite, but no weight should be laid on the limb for several months."

"Of Fractures.

"The signs by which fractures may be known, having been already pointed out with sufficient minuteness, it will be unnecessary to dwell thereon; it will be well, however, to recollect this general rule: In cases where, from the accompanying circumstances and symptoms, a strong suspicion exists that the bone is fractured, it is proper to act as though it were positively ascertained to be so."

"Fracture of the Bone of the Nose.

"The bones of the nose from their exposed situation, are frequently forced in. Any smooth article that will pass into the nostril should be immediately introduced with one hand, to raise the depressed portions to the proper level, while the other is employed in moulding them into the required shape."

"Fracture of the Lower Jaw

"This accident is easily discovered by looking into the mouth, and is to be remedied by keeping the lower jaw firmly pressed against the upper one, by means of a bandage passed under the chin and over the head. If it is broken near the angle, or that part nearest the ear, place a cushion or roll of linen in the hollow behind it, over which the bandage must pass, so as to make it push that part of the bone forward. The parts are to be confined in this way for twenty days, during which time, all the nourishment that is taken should be sucked between the teeth. If, in consequence of the blow, a tooth is loosened, do not meddle with it, for if let alone, it will grow fast again."

"Fracture of the Collar Bone.

"This accident is a very common occurrence, and is known at once by passing the finger along it, and by the swelling, &c. To reduce it, seat the patient in a chair without any shirt, and place a

pretty stout compress of linen, made in the shape of a wedge, under his arm, the thick end of which should press against the arm-pit. His arm, bent to a right angle at the elbow, is now to be brought down to his side, and secured in that position by a long bandage, which passes over the arm of the affected side and round the body. The fore-arm is to be supported across the breast by a sling. It takes from four to five weeks to re-unite."

Fractures of the Arm.

"Seat the patient on a chair, or the side of a bed, let one assistant hold the sound arm, while another grasps the wrist of the broken one, and steadily extend it in an opposite direction, bending the fore-arm a little to serve as a lever. You can now place the bones in their proper situation. Two splints of shingle or stout paste board, long enough to reach from below the shoulder to near the elbow, must then be well covered with tow or cotton, and laid along each side of the arm, and kept in that position by a bandage. The fore-arm is to be supported in a sling. Two smaller splints may for better security be laid between the first ones, that is one on top, and the other underneath the arm, to be secured by the bandage in the same way as the other."

Fractures of the Bones of the Fore-Arm.

"These are to be reduced precisely in the same way, excepting the mode of keeping the upper portion of it steady, which is done by grasping the arm above the elbow. When the splints and bandage are applied, support it in a sling.

Fractures of the Wrist.

"This accident is of rare occurrence. When it does happen the injury is generally so great as to require amputation. If you think the hand can be saved, lay it on a splint well covered with tow; this

extends beyond the fingers; place another splint opposite to it, lined with the same soft material, and secure them by a bandage. The hand is to be carried in a sling.

"The bones of the hand are sometimes broken.-- When this is the case, fill the palm with soft compresses or tow, and then lay a splint on it, long enough to extend from the elbow to beyond the ends of the fingers, to be secured by a bandage, as usual.

"When a finger is broken, extend the end of it until it becomes straight, place the fractured portion in its place, and then apply two small pasteboard splints, one below and the other above, to be secured by a narrow bandage. The top splint should extend from the end of the finger over the back of the hand. It may sometimes be proper to have two additional splints for the sides of the finger."

Fractures of the Ribs.

"When, after a fall or blow, the patient complains of a pricking in his side, we may suspect a rib is broken. It is ascertained by placing the tips of two or three fingers on the spot where the pain is, and desire the patient to cough, when the grating sensation will be felt. All that is necessary, is to pass a broad bandage round the chest, so tight as to prevent the motion of the ribs in breathing; and apply No. 6 over the place."

Fractures of the Thigh.

"This bone is frequently broken, and hitherto has been considered the most difficult of all fractures to manage. To the ingenuity, however, of Dr. Harts-horne, the world is indebted for an apparatus which does away the greatest impediments that have been found to exist in treating it, so as to leave a straight limb, without lameness or deformity; nor is it the

least of its merits, that any man of common sense can apply it nearly as well as a surgeon.

"It consists of two splints made of half or three-quarter inch well seasoned stuff, from eight to ten inches wide, one of which should reach from a little above the hip, to fifteen or sixteen inches beyond the foot, while the other extends the same length from the groin. The upper end of the inner splint is hollowed out and well padded or stuffed. Their lower ends are held together by a cross piece, having two tenons, which enter two vertical mortices; one in each splint, and secured there by pins. In the centre of this cross piece (which should be very solid) is a female screw. Immediately above the vertical mortices, are two horizontal ones of considerable length, in which slides the tenons of a second cross piece, to the upper side of which is fastened a foot block, shaped like the sole of a shoe, while in the other is a round hole for the reception of the head of the male screw, which passes through the female one just noticed. On the top of this cross piece, to which the foot block is attached, are two pins, which fall into grooves at the head of the screw, thereby firmly connecting them. The foot block, as before observed, is shaped like the sole of a shoe. Near the toe is a slit, through which passes a strap and buckle. Near the heel are a couple of straps, with two rings, arranged precisely like those of a skate, of which, in fact, the whole foot block is an exact resemblance. A long male screw of wood or other material, completes the apparatus.

"To apply it, put a slipper on the foot of the broken limb, and lay the apparatus over the leg. By turning the screw, the foot block will be forced up to the foot in the slipper, which is to be firmly strapped to it, as boys fasten their skates. By turning

the screw the contrary way, the padded extremity of the inner splint presses against the groin, and the foot is gradually drawn down, until the broken limb becomes of its natural length and appearance, when any projection or little inequality that may remain, can be felt and reduced by a gentle pressure of the hand.

"The great advantages of this apparatus, I again repeat, are the ease with which it is applied, and the certainty with which it acts. The foot once secured to the block, in a way that every school-boy understands, nothing more is required than to turn the screw until the broken limb is found to be of the same length as the sound one. It is right to observe that this should not be effected at once, it being better to turn the screw a little every day, until the limb is sufficiently extended.

"As this apparatus may not always be at hand, it is proper to mention the next best plan of treating the accident. It is found in the splints of Desault, improved by Dr. Physic, consisting of four pieces. The first has a crutch-head, and extends from the arm-pit to six or eight inches beyond the foot. A little below the crutch are two holes, and near the lower end on the inside, is a block, below which there is also a hole. The second reaches from the groin, the same length with the first, being about three inches wide above and two below. Two pieces of stout pasteboard, as many handkerchiefs or bands of muslin, with some tow, and a few pieces of tape, form the catalogue of the apparatus.

"It is applied as follows: Four or five pieces of tape are to be laid across the bed, at equal distances from each other. Over the upper two, is placed one of the short pasteboard splints, well covered with tow. The patient is now to be care-

fully and gently placed on his back, so that his thigh may rest on the splint. One of the handkerchiefs, or a strong soft band, is to be passed between the testicle and thigh of the affected side, and its ends held by an assistant standing near the head of the bed. The second handkerchief is to be passed round the ankle, crossed on the instep and tied under the sole of the foot. By steadily pulling these two handkerchiefs, the limb is to be extended, while with the hand the broken bones are replaced in their natural position. The long splint is now to be placed by the side of the patient, the crutch in the armpit, (which is defended with tow,) while the short one is laid along the inside of the thigh and leg.—The ends of the first handkerchief, being passed thro' the upper holes, are to be drawn tight and secured by a knot, while the end of the second one pass over the block before mentioned, to be fastened in like manner at the lower one. All that remains is the short pasteboard splint, which being well covered with tow, is to be laid on top of the thigh. The tape being tied so as to keep the four splints together, completes the operation.

“Tow is to be every where interposed between the splints and the limb, and a large handful of it placed in the groin, to prevent irritation from the upper or counter extending band. It is necessary to be careful, while tying the two handkerchiefs, that they are not relaxed, so that if the operation is properly performed, the two limbs will be nearly of an equal length.

“The superior advantages of Hartshorne's apparatus over this, as well as all others, must be evident to every one acquainted with the difficulty of keeping up that constant extension which is so absolutely necessary to avoid deformity and lameness, and

which is so completely effected by the screw. Next to that, however, stands the one just described, which can be made by any carpenter in a few minutes, and which, if carefully applied, will be found to answer well.

“Fractured thighs and legs generally re-unite in six or eight weeks; in old men, however they require three or four months.

“In cases of fracture of the thigh or leg, the patient should always, if possible, be laid on a mattress supported by boards instead of the sacking, which, from its elasticity and the yielding of the cords, is apt to derange the position of the limb.”

“Fractures of the Knee Pan.”

“This accident is easily ascertained on inspection. It may be broken in any direction, but is most generally so across or transversely. It is reduced by bringing the fragments together, and keeping them in that position by a long bandage passed carefully round the leg, from the ankle to the knee, then pressing the upper fragment down so as to meet its fellow, (the leg being extended,) and placing a thick compress of linen above it, over which the bandage is to be continued.

“The extended limb is now to be laid on a broad splint, extending from the buttock to the heel, thickly covered with tow to fill up the inequalities of the leg. For additional security, two strips of muslin may be nailed to the middle of the splint, and one on each side, and passed about the joint, one below, the other above, so as to form a figure of eight. In twenty or thirty days the limb should be moved a little to prevent stiffness.

“If the fracture is through its length, bring the parts together, place a compress on each side, and keep them together, with a bandage, leaving the

limb extended and at rest. Any inflammation in this, or other fracture, is to be combated by bleeding, &c.

“Fracture of the Leg.

“From the thinness of the parts covering the principal bone of the leg, it is easy to ascertain if it is broken obliquely. If, however, the fracture be directly across, no displacement will occur, but the pain, swelling, and the grating sensation, will sufficiently decide the nature of the accident.

“If the fracture is oblique, let two assistants extend the limb, while the broken parts are placed by the hand in their natural position. Two splints, that reach from a little above the knee to nine or ten inches below the foot, having near the upper end of each four holes, and a vertical mortice near the lower end, into which is fitted a cross piece, are now to be applied as follows: Lay two pieces of tape about a foot long, on each side of the leg, just below the knee joint, and secure them there by several turns of a bandage; pass a silk handkerchief round the ankle, cross it on the instep, and tie it under the sole of the foot. The two splints are now placed one on each side of the leg, the four ends of the pieces of tape passed through the four holes and firmly tied, and the cross piece placed in the mortice. By tying the ends of the handkerchief to this cross piece the business is finished.

“If the fracture is across, and no displacement exists, apply two splints of stout pasteboard, reaching from the heel to the knee, and well covered with tow, one on each side of the leg, securing them by a bandage passing round the limb, and outside the splints.

“In cases of oblique fractures of the leg close to

the knee, Hartshorne's apparatus for fractured thighs should be applied, as already directed."

"Fractures of the Bones of the Foot.

"The bone of the heel is sometimes, though rarely, broken. It is known by a crack at the moment of the accident, a difficulty in standing, by the swelling, and by the grating noise on moving the heel. To reduce it, take a long bandage, lay the end of it on the top of the foot, carry it over the toes under the sole, and then by several turns secure it in that position.

"The foot being extended as much as possible, carry the bandage along the back of the leg above the knee, where it is to be secured by several turns, and then brought down on the front of the leg, to which it is secured by circular turns. In this way the broken pieces will be kept in contact, and in the course of a month or six weeks will be united.

"Fractures of the foot, toes, &c. are to be treated like those of the hand and fingers.

"Of Dislocations.

"The signs by which a dislocation may be known, have been already mentioned. It is well to recollect that the sooner the attempt is made to reduce it, the easier it will be done. The strength of one man, properly applied, at the moment of the accident, will often succeed in restoring the head of a bone to its place, which in a few days would have required the combined efforts of men and pulleys. If after several trials with the best apparatus that can be mustered, you find you cannot succeed, make the patient drink strong hot toddy of brandy or other spirits, until he is very drunk. In this way owing to the relaxed state of the muscles, a very slight force will often be sufficient, where a very great one has been previously used without effect.

"If any objections are made to this proceeding, or if the patient will not consent to it, having your apparatus (which is presently to be mentioned) all ready, make him stand up, and bleed him in that position until he faints; the moment this happens, apply your extending and counter-extending forces. Another important rule is, to vary the direction of the extending force. A slight pull in one way will often effect what has been in vain attempted by great force in another.

"Dislocation of the Lower Jaw.

"This accident, which is occasioned by blows, or yawning, is known by an inability to shut the mouth and the projection of the chin. To reduce it, seat the patient in a chair with his head supported by the breast of an assistant, who stands behind him. Your thumbs being covered with leather, are then to be pushed between the jaws, as far back as possible, while with the fingers, outside, you grasp the bone, which is to be pressed downwards, at the same time that the chin is raised. If this is properly done, the bone will be found moving, when the chin is to be pushed backwards, and the thumbs slipped between the jaws and the cheeks. If this is not done, they will be bitten by the sudden snap of the teeth as they come together. The jaws should be kept closed by a bandage for a few days."

"Dislocation of the Collar Bone.

"This bone is rarely dislocated. Should it occur, apply the bandages, &c. directed for a fracture of the same part."

"Dislocation of the Shoulder.

"Dislocations of the shoulder are the most common of all accidents of the kind. It is very easily known by the deformity of the joint, and the head of the bone being found in some unnatural position. To

reduce it, seat the patient in a chair, place one hand on the prominent part of the shoulder blade, just above the spot where the head of the bone should be, while with the other you grasp the arm above the elbow and pull it outwards. -

"Should this not succeed, lay the patient on the ground, place your heel in his arm-pit, and steadily and forcibly extend the arm, by grasping it at the wrist. The same thing may be tried in various positions, as placing yourself on the ground with him, laying him on a low bed, while you are standing near the foot of it, &c.

"If this fails, pass a strong band over the shoulder, carry it across the breast, give the ends to assistants, or fasten them to a staple in the wall; the middle of a strong band or folded towel is now to be laid on the arm above the elbow, and secured there by numerous turns of the bandage. The two ends of the towel being then given to assistants, or connected with a pulley, a steady, continued, and forcible extension is to be made, while with your hands you endeavor to push the head of the bone into its place.

"Dislocation of the Elbow.

"If the patient has fallen on his hands, or holds his arm bent at the elbow, and every endeavor to straighten it gives him pain, it is dislocated backwards. Seat him in a chair, let one person grasp the arm near the shoulder, and another the wrist, and forcibly extend it, while you interlock the fingers of both hands just above the elbow, and pull it backwards, remembering that under those circumstances, whatever degree of force is required, should be applied in this direction. The elbow is sometimes dislocated sideways or laterally. To reduce it, make extension by pulling at the wrist, while some one secures the arm above, then push the bone into its place

either inwards or outwards, as may be required. After the reduction of a dislocated elbow, keep the joint at perfect rest for five or six days, and then move it gently. If inflammation comes on, for management, see page 104.

“Dislocation of the Wrist, Fingers, &c.

“Dislocation of the wrists, fingers, and thumb, are readily perceived on examination; they are all to be reduced by forcibly extending the lower extremity of the part, and pushing the bones into their place. If necessary, small bands may be secured to the fingers by a narrow bandage, to facilitate the extension. These accidents should be attended to without delay, for if neglected for a little time, they become irremediable.”

“Dislocation of the Thigh.

“Notwithstanding the hip joint is the strongest one in the body, it is sometimes dislocated. As a careful examination of the part, comparing the length and appearance of the limb with its fellow, &c. sufficiently mark the nature of the accident, we will proceed to state the remedy.

“Place the patient on his back, upon a table covered with a blanket. Two sheets, folded like cravats, are then to be passed between the thigh and testicle of each side, and their ends (one half of each sheet passing obliquely over the belly to the opposite shoulder, while, the other half passes under the back in the same direction) give to several assistants, or what is much better, tied very firmly to a hook, staple, post, or some immovable body. A large, very strong napkin, folded as before, like a cravat, is now to be laid along the top of the thigh, so that its middle will be just above the knee, where it is to be well secured by many turns of a bandage. The two ends are then to be knotted. If you have

no pulleys, a twisted sheet or rope may be passed through the loop formed by the napkin. If you can procure the former, however, cast the loop over the hook of the lower block, and secure the upper one to the wall, directly opposite to hooks or men that hold the sheets that pass between the thighs. A steadily increasing and forcible extension of the thigh is then to be made by men who are stationed at the pulleys or sheet, while you are turning and twisting the limb to assist in dislodging it from its unnatural situation. By these means, properly applied, the head of the bone will frequently slip into its socket with a loud noise.

"If, however, you are foiled, change the direction of the extending force, recollecting always, that it is not by sudden or violent jerk, that any benefit can be attained, but by a steady increasing and long continued pull. Should all your efforts prove unavailing, (I would not advise you to loose much time before you resort to it,) make the patient, as before directed, excessively drunk, and when he cannot stand, apply the pulleys. If this fails, or is objected to, bleed him till he faints, and then try it again."

"Dislocation of the Knee-Pan."

"When this little bone is dislocated, it is evident on the slightest glance. To reduce it, lay the patient on his back, straighten the leg, lift it up to a right angle with his body, and in that position push the bone back to its place. The knee should be kept at rest for a few days.

"Dislocation of the Leg."

"As these accidents cannot happen without tearing and lacerating the soft parts, but little force is required to place the bones in their natural situation. If the parts are so much torn that the bone slips again

out of place, apply Hartshorne's or Desaults apparatus for a fractured thigh."

"Dislocation of the Foot.

"The foot is seldom dislocated. Should it happen, however, let one person secure the leg, and another draw the foot, while you push the bone in the contrary way to that in which it was forced out. The part is then to be covered with compresses dipped in lead water, and a splint applied on each side of the leg, that reaches below the foot. Accidents of this nature are always dangerous; all that can be done to remedy them consists in the speedy reduction of the bone, keeping the parts at rest, and subduing the inflammation by following the directions of page 104.

"Of Compound Accidents.

"Having spoken of the treatment to be pursued for a bruise, wound, fracture, and dislocation, as happening singly, it remains to state what is to be done when they are united.

"We will suppose that a man has been violently thrown from a carriage. On examination, a wound is found in his thigh, bleeding profusely, his ankle is out of joint, with a wound communicating with its cavity, and the leg broken.

"In the first place, stop the bleeding from the wound in the thigh, reduce the dislocation next, draw the edges of the wounds together with sticking plaster, and lastly, apply Hartshorne's or Dassault's apparatus to remedy the fracture.

"If, instead of a wound, fracture and dislocation, there is a concussion or compression of the brain, a dislocation and fracture, attend to the concussion first, the dislocation next, and the fracture the last."

"Of Amputation.

"As accidents sometimes happen at sea, or in situations where it is impossible to obtain a surgeon,

and which require the immediate amputation of a limb, it is proper to say a few words on that subject. To perform the operation is one thing, and to know when it ought to be preformed is another. Any man of common dexterity and firmness can cut off a leg, but to decide upon the necessity of doing so, requires much judgment, instances having occurred where, under the most seemingly desperate circumstances, the patient through fear or obstinacy has refused to submit to the knife, and yet afterwards recovered.

“Although in many cases much doubt may exist in determining whether it is proper to amputate or not, yet in others, all difficulty vanishes, as when a ball has carried away an arm. Suppose for a moment, while rolling in a heavy sea, during a gale, the lashings of a gun give way, by which a man loses his knee, leg, or ankle completely mashed, or that either of those parts are crushed by a fall from the topgallant yard, a falling tree, &c. The great laceration of blood vessels, nerves and tendons, the crushing and splintering of the bones, almost necessarily resulting from such accidents, render immediate amputation an unavoidable and imperious duty.

“If there are none of the regular instruments at hand, you must provide the following, which are always to be had, and which answer extremely well—being careful to have the knives as sharp and smooth as possible.

Instruments.—The handkerchief and stick, a carving or other large knife with a straight blade, a pen-knife, a carpenter’s tenon or mitre saw, a slip of leather or linen, three inches wide and eighteen or twenty long, slit up the middle to the half of its length, a dozen or more ligatures, each about a foot long, made of waxed thread, bobbin, or fine twine,

a hook with a sharp point, a pair of slender pincers, several narrow strips of sticking plaster, dry lint, a piece of linen, large enough to cover the end of the stump, spread with simple ointment or lard, a bandage three or four yards long, the width of your hand, sponges and warm water.

“Amputation of the Arm.

“Operation.—Give the patient sixty drops of laudanum, and seat him on a narrow and firm table or chest, of a convenient height, so that some one can support him, by clasping him round the body.—If the handkerchief and stick have not been previously applied, place it as high up the arm as possible, (the stick being very short,) and so that the knot may pass on the inner side of it. Your instruments having been placed regularly on a table or waiter, and within reach of your hand, while some one supports the lower end of the arm, and at the same time draws down the skin, take the large knife, and make one straight cut all round the limb, through the skin and fat only, then with the penknife separate as much of the skin from the flesh above the cut, and all round it, as will form a flap to cover the face of the stump; when you think there is enough separated, turn it back, where it must be held by an assistant, while with the large knife you make a second straight incision round the arm and down to the bone, as close as you can to the double edge of the flap, but taking great care not to cut it. The bone is now to be passed through the slit in the piece of linen before mentioned, and pressed by its ends against the upper surface of the wound by the person who holds the flap, while you saw through the bone as near it as you can. With the hook or pincers, you then seize and tie up every vessel that bleeds, the

largest first, and smaller ones next, until they are all secured. When this is done, relax the stick a little; if an artery springs, tie it as before. The wound is now to be gently cleansed with a sponge and warm water, and the stick to be relaxed. If it is evident that the arteries are all tied, bring the flap over the stump, draw its edges together with strips of sticking plaster, leaving the ligature hanging out at the angles, lay the piece of linen spread with ointment over the straps, a pledget of linen over that, and secure the whole by the bandage, when the patient may be carried to bed, and the stump laid on a pillow.

"The handkerchief and stick are to be left loosely round the limb, so that if any bleeding happens to come on, it may be tightened in an instant by the person who watches by the patient, when the dressings must be taken off, the flap raised, and the vessel be sought for and tied up, after which, every thing is to be placed as before.

"It may be well to observe that in sawing thro' the bone, a long and free stroke should be used, to prevent any hitching, as an additional security against which, the teeth of the saw should be well sharpened and set wide

"There is also another circumstance, which it is essential to be aware of; the ends of divided arteries cannot at times be got hold of, or being diseased their coats give way under the hook, so that they cannot be drawn out; sometimes, also, they are found ossified or turned into bone. In all these cases, having armed a needle with a ligature, pass it through the flesh round the artery, so that when tied, there will be a portion of it included in the ligature along with the artery. When the ligature has been made

to encircle the artery, cut off the needle and tie it firmly in the ordinary way.

"The bandages, &c. should not be disturbed for five or six days, if the weather is cool; if it is very warm, they may be removed in three. This is to be done with the greatest care, soaking them well with warm water until they are quite soft, and can be taken away without sticking to the stump. A clean plaster, lint, and bandage are then to be applied as before, to be removed every two days. At the expiration of fourteen or fifteen days the ligatures generally come away; and in three or four weeks, if every thing goes on well, the wound heals."

"Amputation of the Thigh.

"This is performed in precisely the same manner as that of the arm, with one exception, it being proper to interpose a piece of lint between the edges of the flap, to prevent them from uniting until the surface of the stump has adhered to it."

"Amputation of the Leg.

"As there are two bones in the leg which have a thin muscle between, it is necessary to have an additional knife to those already mentioned to divide it. It should have a long narrow blade, with a double cutting edge, and a sharp point; a carving or ease knife may be ground down to answer the purpose, the blade being reduced to rather less than half an inch in width. The linen or leather strip should also have two slits in it instead of one. The patient is to be laid on his back, on a table covered with blankets or a matress, with a sufficient number of assistants to secure him. The handkerchief and stick being applied on the upper part of the thigh, one person holds the knee, and another the foot and leg as steadily as possible, while with the large knife the operator makes an oblique incision round the

limb, through the skin, and beginning at five or six inches below the knee-pan, and carrying it regularly round in such manner, that the cut will be lower down on the calf than in front of the leg. As much of the skin is then to be separated by the penknife as will cover the stump. When this is turned back, a second cut is to be made all round the limb and down to the bones, when with the narrow bladed knife, just mentioned, the flesh between them is to be divided. The middle piece of the leather strip is now to be pulled through between the bones, the whole being held back by the assistant, who supports the flaps while the bones are sawed, which should be so managed that the smaller one is completely cut through by the time the other is half so. The arteries are then to be taken up, the flap brought down and secured by adhesive plaster, &c. as already directed."

"Amputation of the Fore-Arm.

"As the fore-arm has two bones in it, the narrow bladed knife, and the strip of linen with three tails, are to be provided. The incision should be straight round the part, as in the arm, with this exception, complete it as directed for the preceding case,"

"Amputation of Fingers and Toes.

"Draw the skin back, and make an incision round the finger, a little below the joint it is intended to remove, turn back a little flap to cover the stump, then cut down to the joint, bending it so that you can cut through the ligaments that connect the two bones, the under one first, then that on the side.—The head of the bone is then to be turned out, while you cut through the remaining soft part. If you see any artery spirt, tie it up—if not, bring down the flap and secure it by a strip of sticking plaster, and a narrow bandage over the whole.

Remarks.—To prevent the troublesome consequences of secondary bleeding, before the strips of plaster are applied over the edges of the flap, give the patient, if he is faint, a little wine and water, and wait a few minutes to see whether the increased force it gives to the circulation, will occasion a flow of blood; if it does, secure the vessel it comes from. If there is a considerable flow of blood from the hollow of the bone, place a small cedar plug in it — Should violent spasms of the stump ensue, have it carefully held by assistants, and give the patient large doses of laudanum; it may, in fact, be laid down as a general rule, that after every operation of this kind, laudanum should be given in greater or less doses, as the patient may be in more or less pain."

"Of Suspended Animation

"From Drowning.—The common methods of rolling a drowned person on a barrel, or holding them up by the heels, &c. are full of danger, and should never be permitted. If a spark of life should happen to remain, this violence would extinguish it forever. — As soon, therefore, as the body is found, convey it as gently as possible to the nearest house, strip it of the wet clothes, dry it well, and place it on a bed between warm blankets, on the right side, with the head elevated by pillows. Every part is to be now well rubbed with flannels dipped in warm brandy, or spirits of any kind, while a warming pan, hot bricks, or bottles or bladders filled with warm water, are applied to the stomach, back, and soles of the feet. During these operations a certain number of the assistants (no more persons are to be allowed in the room than are absolutely necessary) should try to inflate the lungs, by blowing through the nozzle of a common bellows, or a pipe of any kind, placed in

one nostril, while the other with the mouth are kept closed. If a warm bath can be procured, place the body in it. Clysters of warm brandy and water, salt and water, or peppermint water may be injected.

"All these operations, particularly rubbing the body, and trying to inflate the lungs, should be continued for six or eight hours, and when the patient has come to himself, small quantities of warm wine, wine-whey, brandy and water, &c may be given to him from time to time. If, after he has recovered, a stupor or drowsiness remains, (but not before,) sweat them.

"Should the accident occur in winter, and the body feel cold, as if frozen, previously to applying warmth, rub it well with snow, ice, or very cold water. Above all things, remember that perseverance for many hours in the remedies pointed out, may give you the unspeakable pleasure of restoring a fellow creature to life." After they have come too, give them a regular sweat.

"If a limb is frost-bitten, the cold applications used should be continued longer, and warmth be more gradually applied than when the whole body is frozen. Care should be taken to handle the parts carefully, so as not to break off the ear, tip of the nose, &c.

Dyspepsia.

This complaint is frequently caused by too steady a use of coffee, or hard drink, though it is one species of stagnation of blood. It is worthy of notice, that coffee thickens the blood, and is one means of stagnation which should always be avoided in curing every species of stagnation. When the filth of the blood strikes in against the stomach, it affects that part which causes the puking, and sometimes affects

the throat--This destroys the faculty of the stomach, so injurious is the discharge through the vents of the stomach. It is like all other stagnations--there is an over stock of gastric juices, or a bitter sour in the stomach. I conclude that the cholera will operate nearly as hard on the people that drink coffee to an excess, as on the drunkard. As I have named coffee as one part of our diet that is injurious, I will name some others that ought to be avoided in cleansing people's blood. One is butter, another is cabbage, and apples or cider, and peaches; and more especially if the fruit is green. These articles have often been in my way. The symptoms of the dyspepsia is that of a common cause, with sometimes a puking and pain, or uneasiness in the stomach; sometimes the throat is affected; the food does not lie right on the stomach. This sometimes brings on a consumption; if so, they both operate together.

For a cure, follow the same rule as in a consumption. Exercise is of great importance in this disease.

INDIAN CUSTOMS AND DOCTORINGS.

From my acquaintance with the different plans of Indian doctoring, I shall try to select such parts as I consider most genuine and useful to lay before the readers; as there are several plans that go under this name, we are left to conjecture what is genuine and what is not. If any of my readers should have a better knowledge of any particular point of this doctoring than I have, I shall feel very much obliged to them to let me know: and if it should be found to be an advantage, I will recompense them, for my object is to get as near the substance of the system as possible. But I have compiled this work from various ones, according to the best of my knowledge.

and ability. In point of customs, I have selected from Dr. B. Rush's work on this subject, with my own acquaintance with them: and in point of doctoring, I have learned more from others. Dr. Richard Carter, of Kentucky, has given his own views of doctoring, but has not been so careful to give the views of Indians as he ought to have done, provided he was acquainted with them as he professed to be; and his work appears to be a mixture of medical doctoring, with his own inventions, and bordering in some degree on Indian doctoring. I have not learned from it as much as from some others; and in examining the different systems, to select that part which I supposed to be Indian doctoring and customs. I sometimes judge from the appearance or manner of it, and other times from the title or manner of language made use of. Roots and herbs that had an Indian name to them. I took for granted that the Indians used them. As I do not suppose that mine is genuine in every point, I shall wish persons to assist me to correct it, wherein it is wrong, though I fancy that the reader will find it as near correct, if not more so, than any other that is now in vogue.

A great deal of the future health of man depends on his origination and rise in the world. A child born of healthy parents, and being exposed to the different elements, at or near its birth, that is of cold water or air, with other changes, such children generally bring into the world a system formed by nature to resist the cause of diseases. The treatment of children among the Indians tends to secure this firmness of constitution, that becomes in some degree hereditary. To harden them against the inclemency of the weather, some of them immerse their children in cold water frequently, and others expose them to the cold when they are quite young, or

bathe them in cold water; and to preserve their shape, they are tied to a board with their backs for several months, and live entirely on their mother's milk. The friction and speedy motion of the system and blood in infancy, forbid stimulating food of all kinds. Nature never calls for animal food until she has provided the child with teeth which are necessary to chew. I am at a loss to express my views of the injury done in our country, as well as in the world in general, by living on strong, stimulating diet and especially while young. We may observe that there are but few cases of fits of any kind among families that live on light diet; and especially in childhood; their sensitive or mental faculties are generally more lively as well as the common motions of the body are more active; and they are more clear of ulcers, swellings, cancers and the like, with other advantages. The Indian children are frequently part naked in their common deportment in life, and either barefooted or wear a kind of thin mockasin which is but little defence against water or cold; their tents partly open, and even sometimes without tents, and the tops of their heads are generally exposed to the elements; and living partly naked in this way, they frequently receive the showers of rain, commencing to wet the top of their heads and so penetrating down the body, which seldom has a bad effect. In this way their constitutions are prepared to stand the inclemency of the weather; and what we call a bad cold is almost a stranger among them. The diet of Indians are generally more fresh than ours, and wild animals are easier digested than tame ones. Their vegetables consist of roots and fruits, which are also easier digested; and in the warm seasons of the year, or at times that suit, they are employed in

fishing, and live mostly on them; but their way of eating them partly fresh does not stimulate the blood as they do with us. Although a great deal of our continent abounds with salt springs, yet I cannot find that the Indians ever used salt in their diet until they were instructed to do so by the Europeans. As animal food is not much stimulating without salt, consequently the body of their diet is not calculated to stimulate and inflame the blood as ours is, when we make use of animal food seasoned high with salt, pepper, and the like. And they have not such a mixture of diet as we have: and if there is an inflammation on the outside of the body, they apply something as simple as a poultice of pounded balsam, or elder leaves, or the bark. If it is of a poisonous nature, a poultice of pounded wild celandine, or what some call touch-me-not; and in each case occasionally bathe the part in cold water. If such means does not cure, different ways are taken to burn the place some by holding it near the fire, or by pouring hot ashes on it, or holding a piece of spunk on the place while it is burning, and thus call it a burn and then put a poultice, something as simple as slippery elm bark; or if it inflames, bathe it repeatedly in cold water. They preserve their meats from putrefaction by cutting it into small pieces and exposing it to the sun in summer, and in the winter to frost; in one case it is dried, and in the other it is so frozen that it cannot putrify. In dressing their meats they are careful to preserve their juices. They generally prefer it in soups, therefore the use of the spoon preceded that of the knife and fork. They take the same pains to preserve the juices of their meat when they roast it; they turn it often, and not crowding it near the fire, but having it at such a distance off that some persons would suppose, that it would neither

roast nor cook at all. This brings me in mind of the many nights that we spent together during the last war; for an Indian would frequently roast my meat along with his, and for this purpose he would cut him a stick with not less than three forks, on which he would stick the meat, and set it at a proper distance from the fire, and in the course of the night he would have it cooked in the tenderest manner; and though I would see the process, yet I could not do it as well as himself: in this way they preserve the juices. The efficacy of this animal juice in dissolving substances in the stomach has not been equaled by any of those soups or liquors which modern luxury has mixed for that purpose. The Indians have no set time for eating, but obey the call of their appetite. After days spent in the chase or in war, they are apt to commit excess in eating: it is common to see them spend several hours in satisfying their hunger. This is occasioned not so much on the account of the quantity they eat, as it is by the pains they take in chewing it. In this way they are brought to maturity and thus live, their constitutions thus prepared to stand the inclemency of the weather. The customs peculiar to the men consist chiefly in such employments as are necessary to preserve life and defend their nation. These employments are hunting, fishing, and war, each of which are conducted in a manner that tend to call forth every fibre and part of the body into exercise, and these means preserve health by rousing the blood into circulation; so it flows to the extreme parts of the body, and thus discharges the water and matter from it. Though these are rough means, yet they generally have a good effect. We proved the effect of such means while we were spies: we travelled frequently day and night through all kinds of weather, and frequent

ly lay out, without fire the coldest nights in winter, and yet the army were more sickly than we were.

In the time of plenty and peace, in war, and more especially in victory, we see Indians rise into exercise and strike a dance, having little bells or beads to their ankles, and instruments in their hands to make a noise, and parade round the fires in winter, and in summer round other objects, perhaps poles set upon forks, over which they make motions, as though they would tomahawk or scalp one another, and try their activity to see how near they could strike at one another's head, and still miss it; and every few rounds round the fire, they generally raise a shout, and thus set the blood in a high state of circulation.

The women or squaws generally stand or remain near one place in their dance and shuffle their feet, having a number of deers hoofs and the like fastened near the bottom of their garments while they make a low and rather a coarse noise.

We are told that they display their manhood and strength of mind by keeping at a distance from the female sex, or not acknowledging they care any thing about them when they are with them; and when they see proper to marry, which is not commonly till they are thirty years of age, they have but little to say on the subject till the business is completed. They act partly like the Jews of old, they take themselves wives; by this means they avoid in a degree the effects of love which have buried many in difficulties, distress, and death. We can discover that they are not accustomed to complain when injured either in body or mind, and though the child is tied to a board, and it set up against a tree for hours at a time, it scarcely complains, and this is the case with them when they come to years of maturity and old age—this is an advantage to their health.

One custom peculiar to all savage nations, is to impose heavy burdens upon their wives, and indeed on all their females. The female does principally all their druggery and domestic labors; this gives a firmness to their bodies and strength to their constitutions. We are told that their mends seldom begin to flow before they are eighteen years of age and generally cease before they are forty*—they have them in small quantities, but at regular intervals—they seldom marry till they are above twenty. When marriages are unfruitful, which is seldom the case, a separation is obtained by means of an easy divorce; so that they are unacquainted with the disquietude which sometimes arise from barrenness. During pregnancy the women are excused from the more laborious parts of their labor, hence miscarriages rarely happen among them. Nature is their only midwife; their labors are short, and accompanied with little pain. Each woman is delivered in a private cabin, without so much as one of her own sex to attend her; and after washing herself in cold water, she returns in a few days to her usual employment, so that she knows nothing of those accidents which arise from delicacy, being shut up in a warm room for a month or two, which prepares the system to be tender and to take cold. It is remarkable that there is hardly a time or period between their marriage and the cessation of the mends in which they are not pregnant or giving suck. This is the most natural state of the constitution during that interval, and hence we often find it connected with the best state of health in the women of civilized nations. Here I will remark, that the savage women keep a stea-

*In this they differ from other women which generally commences between the ages of 14 and 15, and ceases between 45 and 50.

dy exercise, but not to extremes, during pregnancy, which keeps the muscles and cords pliable and willing to give way when nature shall demand these things. But in women who set still, and the blood becomes thick, the muscles and cords become partially set, and sometimes break before they will give way, or burst parts of the flesh. so it is necessary that women live on a moderate, weak diet and keep regular exercise, during pregnancy. Another custom which is common with the male and sometimes attended to by the female—that of painting in the southern climates. It is said they use grease with a kind of yellow stone, which is of rather a deeper color than their skin, to stop excessive perspiration; but the northern Indians generally use the stone or clay, and paint their foreheads and cheeks either all over or in streaks, which makes them look more savage than they otherwise would look. They are not subject to so many passions, which disorder the body, as we are; anger is in a measure concealed and buried—envy and ambition are in a measure excluded. As love is one of our passions, the Indian is guarded against it. “The weakness of love” says one “which is so much indulged in, in ages of humanity and politeness, is regarded among savages as the most unpardonable weakness or loose pleasure.” A young man would think himself disgraced forever if he showed the least preference of one woman above another, or did not express the most complete indifference both as to the time when, and the person to whom, he was to be married. Thus are they exempt from the violent and lasting diseases which accompany the several stages of such passions in both sexes among civilized nations. I hinted above, that Indian’s diet did not stimulate the blood as that of the whites, who live in luxuries and use salt in their diet. Here we

have to remark, that since they became acquainted with the Europeans, they have become acquainted with spirits, and some of them appear to be fond of it and use it to excess. Having made some remarks on the physical customs of the Indians, we shall proceed now to inquire into their diseases, or the causes that produce diseases among them. The custom among the Indians of sleeping in the open air in the different climates, and the effect of heat and cold upon their bodies, to which the warmth of their cabins expose them; their long marches, excessive exercise their intemperance in eating, to which their long fasting and their public feasts naturally prompt them; and, lastly their habitations being most commonly near the bank of some stream of water. These things make them subject to fevers, pluerisies and rheumatisms; these with the dysentery, constitute the greater part of their diseases, though they are subject to being poisoned both externally and internally. The small pox and the venereal diseases were communicated to the Indians in North America by the Europeans, nor can I find they were subject to them before. They are seldom affected with the gout or scurvy, or any sedentary complaint, though they live a great deal on animal food, but are still in a degree exempt from salt, and those among them who drink to excess, do it more by spells, and are not accustomed to take it regularly or habitually from childhood. And as madness and craziness come in general from a fomentation of the blood, the Indians experience very little of it. The Indians make but a very small account of worms: they consider that they are natural or common to the body, and only operate with other diseases, though most animals are affected with them at certain times. But I am fully convinced that one half of the complaints that are charged

to worms, are really some other disorder; and the Indians appear to be but little affected with diseases and pains in the teeth. All the reason I could ascribe for it, is that they go with the top of their head naked, and are hardened to the inclemency of the weather, and do not take cold in the teeth: neither do their children suffer in cutting teeth like some of ours. Their practice subjects them to many accidents, such as wounds, and broken limbs, and bruises. This brings me in mind of a circumstance that took place when we were spying together, and there being but a small company of us, we were all the time in danger of being attacked by the enemy, both by the Indians and the British; for this reason we were not allowed to talk or shoot after we got a few miles from the camp, lest we should be found out. but march in silent order from eight to fourteen days at a time, and all the conversation was done by whispering to one another at a certain time. In one of our silent marches, along a narrow path, in single file, on the waters of Branch's Fork of Auglaize, we discovered a large bear a few yards from us, with his head in a hollow stump; and being on the opposite side of the stump from us, he did not discover us, but was digging in the stump, which our pet Indians discovered, and knowing that they were not allowed to shoot, they layed down their guns and blankets, took their tomahawks in their hands, and made secretly to the stump; and as they were preparing to strike round the stump, the bear pulled out his head suddenly and took off, with the Indians close on his heels, for forty rods at least. This was not the only case in which they were exposed to danger. But I found they were willing to climb trees for raccoons and the like, even into the top of the highest trees. But the most fatal danger they are exposed to, is

that of war. They are divided into many parties, and subdivided, and are so apt to war with one another, as well as with other nations. By these means they subject themselves to a number of wounds, as well as a general declension among them. Having thus pointed out their natural diseases, I will make a few remarks on their remedies, which are simple and few in number. We find that in every nation they encourage the practice of physicians, and attend on their sick with success in a general point of view. In case of fevers, which constitute almost half of their disorders, they get some simple roots or herbs that they conclude will assist in curing the complaint, and generally make a tea of it, and drink it freely and sweat. They differ as to what roots they make use of; some make use of Robbin's plantain root and tops alone; some the Indian turnip; some the cohush roots, though they are apt to mix several together, such as spice bush bark, angelico, cohush, Robbin's plantain, &c. In one case I understood the Indian doctor mixed Robbin's plantain, cohush, Indian turnip, and wild ginger; though it is probable they have many others, such as the black snake root and the like. These likely are the most common medicines for fevers of every kind, as they treat them nearly alike, except low stagnated fevers, for which, possibly, they may use hotter medicines than they do for others, such as Indian turnip, henpepper, or prickly ash bark, though I am not fully satisfied that it is the case. But one thing is quite certain, that is, that they make use of a cold bath in these fevers, after which the patient is wrapped up in bed, and goes through a sweat by drinking his teas. The Indian form of sweating in general, which is used for a variety of complaints, is as fol-

lows: the patient is placed in a close tent or wigwam, over a hole in the earth, in which a hot stone is placed, and water is gradually thrown upon this stone, which involves the patient in a cloud of vapor; this with his drinking only of his teas, involves him in a free sweat. In this situation he rushes out and plunges himself into the water, from whence he retires to his bed, covers warm, drinks his teas, and sweats. Several such trials as this seldom fails in curing in a few days. Their diet is fresh in general and if the stomach is partly empty during the time, is nearly all the directions that are wanting.

As the cohush is an Indian name, and I do not know the English name of this herb, it is necessary to describe it, that the reader may know how to find it. It is a weed that has some appearance of the rattle root, and often grows in the same kind of soil; it grows near two feet high, and about the month of July has a kind of bluish green balls on the top, near as large as the end of a man's finger; the roots are what are used. It branches very much, and is near the size of a small wheat straw when it starts from the main root.

Though the above cures are somewhat odd and rough, yet I have a favorable opinion of them from the good effect I have heard of it, but have never practiced them, and have not proved the virtues of the medicines they in general make use of. But the greatest scarecrow is going out of a sweat and plunging into cold water; though it may look dangerous, yet I am convinced there is no danger in it, provided the patient is thrown into a free sweat afterwards.

In dysentery, the rule is to give a tea of wild cherry bark, puccoon root and parsimmon bark. Whether they make use of the yellow puccoon root or not,

is a doubt with me; but the sort I heard of was the red puccoon root—I once heard of crowfoot being made use of in this way. I once talked with a man who was cured of this disease by an Indian, and he stated that his diet was fresh fish; that salt was forbidden, and that he recovered immediately, though he had been very bad.

Consumptions.—The rule is to make a tea of mountain sarsaparilla root and yellow puccoon root, and drinking some of this tea twice a day, and sweat once a day till they get partly well. I was told that an Indian undertook to cure a white man of the consumption, and sweat him once a day for three months. The diet should be fresh and light, and the patient stir as much as possible.

The rule of taking medicine for every complaint, is to begin with a small quantity at first, and increase as the constitution will bear, until the patient takes a considerable portion at a time. Though they are like our own physicians, differing both in medicine and management, even in the same climate; but the substance is nearly the same as to our northern Indians, except Richard Carter, of Kentucky, who has a plan that is different. They but seldom purge, and the means made use of are rattle root, epicuana, and boneset; though the latter sometimes purges, but commonly pukes. They commonly take them in teas, beginning with a small dose, and increase till it operates—make use of fresh broths with them.

I do not find that the Indians ever have their feet frozen, their moccasins allowing their feet to move freely, and thereby promoting the circulation of the blood; this preserves their feet in the day time, and their practice of sleeping with their feet towards the fire, answers the purpose at night; and when the feet do not keep warm enough, they are stript and

held a short time in cold water, and then put on their moccasins and stir themselves again, which generally answers the purpose intended.

Some have thought that Indians could regulate the urine; the common medicine for it is angelico root, chewed and swallowed, though some may make use of agramona root for the same.

Some have thought that Indians could destroy poison, or the effect of it in the body. I suppose that their manner of doctoring in general, that is, to cause a free perspiration, has some effect in that way; but the means they make use of I have not tried sufficiently to know whether they will answer the purpose or not: one is rattle snakes' master, tho' the principal one is wild celandine, or what some call touch-me-not, that is the tops pounded and applied outwardly, or made into tea and taken inwardly. I understand that some are very superstitious about the last-mentioned herb, and have even said that snakes cure themselves when bitten, by eating it. I heard tell of an Indian doctor who made use of a weed called the king-of poison, that is the root of it. I suppose that when applied outwardly, it was pounded; or, if inwardly, made into tea and drank, though these means in general might be powdered and administered either outwardly or inwardly in that way. I am told that they use the hot plantain for a cure—and others bury the part bitten in the ground for a while.

A great deal has been said about Indians curing stiff joints, and bringing persons' limbs into use that have been useless for a great length of time, by infusions of herbs or roots in warm water; and others, by greasing the part with a certain kind of grease. It is worthy of notice that there are many joints and limbs that become stiff or useless for want of the

pores being kept open, and sometimes the matter part of the blood lodges in that part; and whatever tends to open the pores or dissolve and circulate this thick substance, is apt to bring the limb into use.—The most common things that this solution is to be made out of, is Indian turnip, henpepper, or weak lie. The part ought to be bathed in this infusion as warm as possible, half an hour at a time, twice a day, for two weeks at least, if the case requires, and be wrapped up warm through the intervals, and stir as much as possible, so as to keep the blood circulating; and if the patient is not able to stir about, the part ought to be severely rubbed as often as convenient; and if we grease with oil, the best kind of oils that I know of, are rattle-snake's, bear's, polecat's, and red worm's oil. A person should grease with these twice a week for several weeks, and keep the part unusually warm, and exercise as much as possible, that the blood may circulate freely. The diet should be weak and fresh during the time of either of these processes; though some have bathed the part in cold water, and afterwards wrapped it up warm at each interval, and so have kept the same directions as above.

The way to make the red worm oil:—Put a number of worms in a phial or bottle, and hang it near the fire, so as to keep it a little more than blood warm.

Dr. Rush gives an account of Indians aiding nature in delivering a woman of her child, and of an Indian woman in a difficult labor being suddenly delivered in consequence of a general convulsion imposed upon the system by stopping for a short time her mouth and nose, so as to obstruct her breath.

A great deal has been said about Indians curing the dropsy in the body:—The rule is to take sumac,

the bark of the root, or parsimmon bark, make a tea of them; but if any person should use the sumac, they ought to be careful to use that sort that has a smooth bark, as the other is poison. The patient ought to use a small quantity of this tea twice a day, and keep the stomach very empty, and go through a cold bath once a day till the disease abates.

Dropsy in the blood:--Make a tea of the yellow sarsaparilla and cohosh, and drink some of this tea twice a day, and make use of the cold bath once a day, and live on very low diet, or keep the stomach very empty until the disease abates.

Bruises, which are common among the Indians:--Bathe the part in cold water half an hour, and draw blood from as near the place as is convenient, and poultice with pounded balsam.

The Indians are not plagued with stagnations of blood as we are; their long fasting tends to brace them against this disease, in giving nature time to discharge herself, and their severe exercise circulates the blood so freely, that it is another brace against the same complaint.

They are seldom plagued with the scald head or scurvey complaints, for this reason—they are ignorant about doctoring them, and probably would doctor them like they do some that will not be cured other ways, that is, to burn them out with a kind of costic, and doctor them as for burns.

Rheumatisms are treated like fevers in some cases, and others like stiff joints and limbs that have been mentioned.

Pleurisies are treated like fevers in some cases.

It is common for Indians to administer a cold bath in a number of cases of relaxation, consumption, fits and stagnated complaints, that is, among white peo-

ple, as they have but few among themselves, and especially where the patient becomes stupid, as well as to their children, and even in old age; but their manner of administering it terminates in a free sweat, by covering up warm afterwards, and drinking warm teas freely.

“CASTOR OIL.

“This is either imported from the West Indies, where it is obtained by decoction with water, 10 lbs. of seeds yielding 1 lb. of oil; or from the East Indies, where it is obtained by grinding in a mortar, with a hole in the side for the supernatant oil to run off, being in common use there for lamp oil. Or, that made at home by the press, which is the best, especially some that is prepared from cold-blanchéd seeds, with the eye taken out. Some chemists are said to take out the color from the foreign oils, by certain additions, and sell them for English, or, as it is called, cold drawn castor oil. The virosity communicated to the oil by the eyes of the seeds may be got rid of by washing the oil with boiling water, or with weak oil of vitriol. It is soluble in warm spirit of wine, and its adulteration may thus be discovered, if thought necessary; but as all the fat oils have nearly similar qualities, the taste is sufficient for practical purposes. It is purgative in doses from 1-2 an oz. to 1 1-2 ozs. floated on some di-stilled water, or on wine; or if it does not usually stay well on the stomach, on some tincture of senna; or made into an emulsion with yolk of egg, and a little distilled water, with 20 drops of lavender, and a tea-spoonful of simple syrup; it may also be used in clysters. It is particularly useful where a stimulant would be hurtful; as it operates quickly without disturbing the system.

also externally in swelling pains. Contrary to most medicines, on frequent repetition a less dose is sufficient."

"CHICKEN-POX.

Symptoms.—Fever, inability to sleep, pain in different parts of the body, a crop of small pimples or points on the back, which, by the second day, are changed into little blisters, which are ripe on the third, and disappear before the fifth day, without forming true pus or matter, and leaving no marks or pits behind them.

"Distinguish it from the small-pox, by the eruption coming out on the back, by the mildness of the fever, by the fluid contained in the vesicles or blisters not being true pus, and by the whole falling off in scales on the fifth day.

Treatment.—Confine the patient to his bed. keep him cool and quiet, and give him a dose of salts.—This is all that is necessary.

"COW POX.

Symptoms —A pimple at the spot where the matter was inserted, which gradually undergoes certain regular changes, that characterize the complaint.

Changes of genuine Cow-Pox —On the second day, or sooner, from the time of the operation, a small speck of inflammation is to be perceived, which, on the fourth day, is a pimple surrounded by a circle of inflammation. On the fifth, this pimple changes to a vesicle containing a thin fluid. On the sixth, this vesicle is more perfect, its margin forming a regular circle; it is also a little flattened on the top, the centre of which is of a dark color. On the eighth or ninth day, slight chills, flushes of heat &c. are sometimes felt, accompanied by swelling of the

pustule, and pains shooting up into the arm pit, the glands or kernels of which occasionally swell.

"On the tenth or eleventh day, the pustule is surrounded by a circular, vivid, inflammatory blush, that is very beautiful. This is regarded as a decisive proof of the presence of the genuine cow-pox. On the eleventh day, the centre of the pustule begins to grow of a dark color, which gradually increases to a brown or mahogany one by the end of the second week, when it begins to leave the skin, from which it is finally separated.

"*Treatment.*—If the pain, inflammation, and swelling are excessive, reduce them by copious sweats, &c."

"SMALL-POX.

"*Symptoms.*—Inflammatory fever, drowsiness, pain in the pit of the stomach, increased by pressure, pain in the back, vomiting, on the third day the eruption breaks out on the face, neck, and breast, in little red points that look like flea-bites, and which gradually appear over the whole body. On the fifth day, little round vesicles, filled with a transparent fluid, appear on the top of each pimple. The eruptive fever now declines. On the ninth day the pustules are perfectly formed, being round and filled with a thick, yellow matter, the head and face also swelling considerably. On the eleventh day, the matter in the pustules is of a dark yellow color, the head grows less, while the feet and hands begin to swell. The secondary fever now makes its appearance. The pustules break and dry up in scabs and crusts, which at last fall off, leaving pits, which sufficiently mark the cause.

"Such are the symptoms of the distinct or mild

small-pox, but it frequently assumes a more terribly shape, in what is called the confluent. In the latter all the symptoms are more violent from the beginning. The fever is a typhus, there is a delerium preceded by great anxiety, heat, thirst, vomiting, &c. The eruption is irregular, coming out on the second day in patches, the vesicles of which are flattened in, neither does the matter they contain turn to a yellow, but to a brown color. Instead of the fever going off on the appearance of the eruption, it is increased after the fifth day, and continues throughout the complaint. The face swells in a frightful manner, so as to close the eyes; sometimes putrid symptoms prevail from the commencement.

Treatment.—Place the patient in a cold, airy room, and let him be but lightly covered with bed clothes. Purgé him every other day with salts, and give him frequent doses of No. 1 during the whole time. If from any cause the eruption strikes in, put him into the warm bath, give a little warm wine whey, or the wine alone, and apply blisters to the feet. Obstinate vomiting is to be quieted by the breath to a steam, and drinking hot angelico teas.

“In the confluent small-pox, the treatment must be varied as it inclines more or less to the inflammatory or putrid type. If it inclines to the first, act as directed for the distinct kind—if to the last, employ all those means directed in putrid fever. If the eyes are much affected, it will be necessary to bathe them frequently with warm milk, and to smear the lids with some simple ointment.

“DIRECTIONS FOR BLEEDING.

“Tie up the arm, placing the bandage at least two inches above the projection of the elbow joint; and then feel for the pulse at the wrist. If it is stop-

ped, the bandage is too tight, and must be relaxed. Select the most prominent vein, and feel with the tip of the finger if an artery lies near it. If you feel one pulsation so close to the vein that you are fearful of wounding it, choose another. Having set your lancet, (I allude of course to the spring lancet, the only one that can be used with safety,) bend the arm in the precise position it is to be kept in while the blood flows. The cutting edge of the lancet is now to be placed on the vein, while you depress the handle or frame just as much as you wish the cut to be deep; by touching the spring on the side with your thumb, the business is done. To stop the bleeding, relax the bandage, press the two edges of the wound together, place a little compress of linen on it, and bind up the whole with a bandage passing round the joint in a figure of eight."

"ESSENTIAL AND OTHER OILS.

"*Oil of Chamomile.*

"This is obtained from the flowers, and is stomachic. One pound will yield a drachm; 82 pounds will yield from 13 to 18 ounces. It is of a fine blue, even if distilled in glass vessels.

"*Oil of Mint.*

"Obtained from the dried plant; 6 pounds of fresh leaves will yield 3 1-2 drachms; and 4 lbs. dried will yield 1 1 2 ounce. It is stimulant, carminative, and antispasmodic.

"*Oil of Peppermint.*

"Obtained from the dried plant; 4 pounds of the fresh herb will yield 3 drachms. In general it requires rectification to render it bright and fine. It is stimulant and carminative.

"*Oil of Pennyroyal.*

"Obtained from the herb when in flower; 3 pounds will yield 8 drachms; emmenagogue.

"Oil of Sassafras.

"Obtained from the sassafras root; 24 pounds will yield 9 ounces; 30 pounds will yield 7 ounces and one drachm; and 6 pounds will yield two ounces."

"Oil of Wormwood.

"Obtained from the herb; stomachic; 25 pounds of green wormwood will yield from 6 to 10 dramchs of oil; 4 pounds of dry will yield one ounce, and 18 pounds only 1 1-2 troy ounces.

"Oil of Turpentine.

"Distilled, in Europe, from common turpentine, with the addition of about six times as much water; but in America, where the operation is carried on upon a very large scale, no water is added, and its accidental presence is even dreaded, lest it should produce a disruption of the distilling apparatus.

"To rectify Oil of Turpentine.

"Pour three parts of turpentine into a glass retort, capable of containing double the quantity of matter subjected to the experiment. Place this retort on a sand bath; and having adapted to it a receiver 5 or 6 times as large, cement with paste made of flour and water, some bands of paper over the place where the two vessels are joined. If the receiver is not tubulated, make a small hole with a pin in the bands of the cemented paper, to leave a free communication between the exterior and interior of the receiver; then place over the retort a dome of baked earth, and maintain the fire in such a manner, as to make the essence and the water boil.

"The receiver will become filled with abundance of vapors, composed of water and etherous essence, which will condense the more readily if all the radiating heat of the furnace be intercepted by a plate of copper, or piece of board placed between the furnace and the receiver. When the mass of oil, sub-

jected to experiment, has decreased nearly two thirds, the distillation must be stopped. Then leave the product at rest to facilitate the separation of the etherous oil, which is afterwards separated from the water, on which it floats, by means of a glass funnel, the beak of which is stopped by the finger.

"This etherous oil is often milky, or merely nebulous, by the interposition of some aqueous parts, from which it may be separated by a few days' rest. The essence, thus prepared, possesses a great degree of mobility, and is exceedingly limpid.

"*Another Method.*—The apparatus employed in the preceding process may be used in the present case. Fill the retort two thirds with essence, and as the receiver is tubulated, apply to the tubulure a small square of paper moistened with saliva, to afford a free passage to the vapors. Graduate the fire in such a manner as to carry on the distillation very slowly, until a little more than half the oil contained in the retort is obtained. Separate from the product a very small quantity of exceedingly acid and reddish water, which passes at the same time as the etherous essence; by these means the operation is much shortened. The oil of turpentine which remains in the retort is highly colored, and thicker than the primitive essence. It may be used for extending fat, varnish for coarse oil painting.

"*Balsam of Turpentine, or Dutch Drops.*

"Obtained by distilling oil of turpentine in a glass retort, till a red balsam is left.

"Or, by distilling rosin and separating the oils as they come over; first a white oil, then yellow, lastly a thick red oil, which is the balsam. It is stimulant and diuretic.

"*Oil of Tar.*

"Obtained by distilling tar; it is highly valued by

painters, varnishers, &c., on account of its drying qualities; it soon thickens of itself, almost to a balsam; the acid spirit that comes over, with it is useful for many purposes where an acid is wanted.

"Rectified Oil of Hartshorn, or Dippel's Oil.

"Obtained from hartshorn, distilled without addition, rectifying the oil, either by a slow distillation in a retort, &c. no bigger than is necessary, and saving only the first portion that comes over, or with water in a common still; it is very fine and thin, and must be kept in an opaque vessel, or in a drawer, or dark place, as it is quickly discolored by light. It is antispasmodic, anodyne, and disphoretic, taken in doses of from 10 to 30 drops in water.

"Japan Camphor.

"This is obtained from the roots and shoots of the *laurus camphora* and *laurus cinnamomum*, as also the *capura carundu*, by distillation with water. This crude camphor is refined by sublimation with one sixteenth of its weight of lime, in a very gentle heat.

"Camphor from Essential Oils.

"Obtained from the oils of the labiate plants, by a careful distillation, without addition of one third of the oil; the residuum will be found to contain crystals of camphor, on separating which, and redistilling the remaining oil two or three times, the whole of the camphor may be obtained. Oil of rosemary or of sweet marjoram yields about 1 oz. of camphor from 10 of oil; of the sage 1 oz. from 8; and of lavender 1 oz. from 4, or even less of oil; that from oil the marjoram is not volatile, and although it takes fire, it soon goes out. This rosin, like the others from essential oils, may be obtained in a large proportion, if the oil is kept in slightly stopped bottles in a cool place.

"Spirit of Peppermint.

"Take of the herb of peppermint, dried, 1 1-2

lbs. proof spirit, 1 gallon, water, sufficient to prevent burning. Disul off a gallon.

“To make Coral Tooth Powder.

“Take 4 ozs. of coral, reduced to an impalpable powder, 8 ozs Armenian bole, 1 oz. of Portugal snuff, 1 oz. Havannah snuff, 1 oz of good burnt tobacco ashes, and 1 oz. of gum myrrh, well pulverized.—Mix them together, and sift them twice.

“A good Tooth Powder.

“To make a good tooth powder leave out the coral, and, in its place, put in pieces of brown stone ware, reduced to a very fine powder. This is the common way of making it.

“An Astringent for the Teeth.

“Take of fresh conserves of roses, 2 ozs. the juice of half a sour lemon, a little very rough claret, and 6 ounces of coral tooth-powder. Make them into a paste, which put up in small pots; and if it dry by standing, moisten with lemon juice and wine, as before.

“To Prevent the Tooth-ache.

“Rub well the teeth and gums with a hard tooth-brush, using the flowers of sulphur as a tooth powder, every night on going to bed; and if it is done after dinner it will be best; this is an excellent preservative to the teeth, and void of any unpleasant smell.

“To Clean the Teeth.

“Take of good soft water, 1 quart, juice of lemon, 2 oz. burnt alum, 6 grains, common salt, 6 grains.—Mix. Boil them a minute in a cup, then strain and bottle for use; rub the teeth with a small bit of sponge tied to a stick, once a week.

NATURAL PHILOSOPHY.

“We may admire that a varied edifice, or even a magnificent city, can be constructed of stone from one quarry; yet, far surpassing this, it is found that the inconceivably, more varied and magnificent fabric of the universe, with all its orders of phenomena, is of elements but a little more complex.”

The four words, *Atom*, *Attraction*, *Repulsion*, and *Stubbornness*, the reader's eye may be fixed on as four physical parts of nature, while we treat on them.

1st. *Atom*—from the Greek word signifying that which cannot be further divided. The earth, as well as other bodies, are made up of such particles, and held together by attraction.

2nd. *Attraction*—is that which draws substances together.

3rd. *Repulsion*—is that which operates against attraction, and throws substances apart, as when heated water bursts into steam, or gunpowder explodes.

4th. *Inertia*—expresses the fact, that the atoms, in regard to motion, have about them what may be figuratively called a state—whatever it may be—in other words, that bodies neither acquire motion, nor lose motion, nor bend their course in motion, but in exact proportion to some force applied.

It is worthy of notice, that in learning any thing, the scholar's eye should be fixed on all the connecting parts, and comprehend them in as small bounds as possible, so as to give a general view of the whole—as when a person is learning geography they

should have a map of the whole world immediately before them, and as they examine any country they can connect it with the rest, having their courses and climates.

The universe is built of very minute or small atoms, called matter, which by mutual attraction cling together in masses of various forms and sizes. The smallest substance which the human eye can see is still a mass of many atoms of matter, which may be separated from each other, or arranged differently; still they cannot be destroyed or annihilated.

“A small mass of gold may be hammered into thin leaf, or drawn into fine wire, or cut into almost invisible parts, or liquified in a crucible, or dissolved in acid, or dissipated by intense heat into vapours, yet after any and all of these changes, the atoms can be collected again to form the original gold, without the slightest diminution.” And all the substances or elements of which our globe is composed, may thus be cut, torn, bruised, ground, &c. a thousand times, but are always recoverable as perfect as at first.

“And with respect to delicate combinations of these elements, such as exist in animal and vegetable substances, although it be beyond human art originally to produce or even closely to imitate many of them, still in their decomposition and apparent destruction, the accomplished chemist of the present day does not loose a single atom. The coal which burns in his apparatus, until only a little ash remains behind, or the wax taper which seems to vanish altogether in flame, or the portion of animal flesh which putrifies, and gradually dries up and disappears — present to us phenomena which are now proved to be only changes of connection and arrangement.

among the indestructible ultimate atoms, and the chemist can offer all the elements again mixed or separate, as desired, for any of the useful purposes to which they are severally applicable.

“A grain of blue vitriol, or carmine, will tinge a gallon of water so that in every drop the color may be perceived.”

The buzzard smells his food at a considerable distance, and that is done by small atoms flying in the air.

Any substance when sufficiently heated, rises as invisible vapour. Great heat, therefore, would cause the whole of the material universe to disappear, the most solid bodies becoming as invisible as the air we breathe in.

Mutual Attraction.—The earth, though it is made up of many different materials and elements, according to a geographical description, is said to be round; the sun, moon, and stars, or heavenly bodies, are also round, as well as the thousand instances of melted metal that gather into round substances, like the lead allowed to rain down from an elevated sieve, which, by cooling as it descends, retains the form of its liquid drops, and becomes the shot lead to shoot with; as well as the rain drops, dew drops, and drops of mercury, gather in round substances.

Thus a plummet suspended near the side of a mountain, is drawn toward it in a degree proportioned to the size of the mountain by the side of the earth, and the reason why the plummet tends more toward the earth, than the mountain, is because the earth is larger than the mountain.

Logs of wood, floating in water, approach each other, and afterwards generally remain together.—The wreck of a ship, in a smooth sea, after a storm

is often seen gathered into heaps. • These things show the power of attraction.

“The cause of the extraordinary phenomenon which we call attraction, acts at all distances. The moon, tho’ two hundred and forty thousand miles from the earth, by her attraction raises the water of the ocean under her, and forms what we call the tide. The sun, still further off, has a similar influence; and when the sun and moon act in the same direction, we have the spring tides. The planets are so far distant that they appear to us little wandering points in the heavens, yet by their attraction effect the motion of our earth in her orbit, quickening it when she is approaching them, and retarding it when she is receding.

The attraction is greater the nearer the bodies are to each other, and less as they get off farther. Like the light of a candle, that close by appears very evident, but grows dimmer as we get further off. Thus, a board an inch square, one foot from a light, just covers a board of two inches, two feet off, and so increases as we get further off; and as the light spreads over more surface it grows weaker, in proportion to the surface that it covers. Light and attraction act alike in this sense. “What weighs 1000 pounds at the sea shore, weighs five pounds less at the top of a mountain of a certain height, or raised in a balloon—as is proved experimentally by a spring ballance—and at the distance of the moon the weight or force toward the earth of 1000 pounds is diminished to five ounces, as is proved by astronomical tests.”

“Attraction has received different names as it is found acting under different circumstance. The chief distinctions are gravitation, cohesion, capillary and chemical attraction ”

Gravitation is the name given to it when it acts at

a great distance. Cohesion is the name given when it acts at a very short distance, as in keeping the atoms of a mass together. Attraction is called capillary when it acts between a liquid and a solid, which has tubes or pores--attraction has received the name of Chemical attraction when it unites the atoms of two or more distinct substances into one perfect compound.

Dr. Arnott says—"It might appear at first sight that it cannot be the same cause which draws a piece of iron to the earth with the moderate force, called its weight, and which maintains the constituent atoms of the iron in such strong cohesion; but when we recollect that attraction is stronger as the substances are nearer to each other, the difficulty vanishes. Atoms, in absolute contact, would be a million times, nay, infinitely nearer to each other, than when only a quarter of an inch apart; and, therefore, when the heat among the atoms of any cohering mass allows them to approach near, they must attract mutually with great force."

I would not offer to contradict the doctor in these last remarks, yet I possess some small doubts whether every thing that is stated in this last point is correct. One is, whether the word *infinite* would apply in that place; and another is, whether it is not the kind of metal that maintains the strength as well as atoms, being close together, though he might argue that this was the reason why it was stronger, that the atoms were closer than other metal—though he has brought forward many more evidences, that I have not room in this piece to quote.

"Were it not, then, because the surfaces of bodies are in general so very rough and irregular, that if applied to each other they can only touch, perhaps, in four or five point out of a million, which the surface contains, bodies would invariably stick together, or

cohering by any accidental contact, the effect of artificially smoothing the touching surfaces, is seen in the following examples.

“Similar portions being cut off with a clean knife from two leaden bullets, and the fresh surfaces being brought into contact with a light turning pressure, the bullets cohere almost as if they had been originally cast together.

Two small, of perfectly smooth plates of glass or marble, laid upon each other, adhere with great force; and, indeed, so do most well polished flat surfaces.

Repulsion is often effected by heat. Were there only atoms and attraction, as has been explained, the whole material of creation would rush into close contact, forming one huge solid mass of stillness and death. But there is also heat which counteracts attraction. When a continued addition of heat is made to any substance, it gradually increases the mutual distance of the constituent atoms, or dilates the body a solid; thus is first softened, then melted, or fused, that is to say, reduced to the state of liquid, as the cohesion attraction is overcome.— And lastly, the atoms are repelled to still greater distances, so that the substance is converted into elastic fluid or air. Abstraction of heat from such air, causes a return of states into the reverse order. Ice, when heated, thus becomes water, and the water when heated further becomes steam, when cooled again becomes water as before, and the water becomes ice. Other substances are similarly effected by heat: but as all have different relations to it, some requiring much more heat for liquefaction, and some very little. We therefore have that beautiful variety of solids, liquids, and air, which makes up our external nature. For instance, a rod of iron

which, when cold, will pass through a certain opening, and will lie lengthwise between two fixed points; but when heated, becomes too thick and too long to do either. The common thermometer for measuring the degrees of heat, is a glass filled with mercury or other fluid, and having a narrow tube rising from it, into which the fluid ascends on being expanded by heat, and so makes the degree

A bladder of cold air, on being heated, becomes tight, and in certain cases will burst.

As different materials require a different degree of heat to dissolve them, so gold requires 5000 degrees, lead 600, ice 32, &c.; and if heating be afterwards continued, most things at certain higher temperatures suddenly expand again to many times the present size, until the liquid becomes airiform fluid. One pint of water, driven off as steam from the boiler of a low pressure steam engine, fills a space of nearly 2000 pints. On the earth, near the equator, common sealing wax will not retain impressions, but is oil in the day, and a soft solid at night; and tallow candles cannot be used: and near our pole in winter the water is hard, and so are the different oils; thus we see that heat causes repulsion, as well as wind, water or fire, when pressed, will explode, as well as gunpowder. These are the most common means of repulsion.

Were there no motion in the universe, it would be dead—it would be without the rising or setting sun—or rivers flowing—or circulation of wind—and there would be neither sounds nor light, or animal existence. Motion is only understood by comparing one object with others, and perhaps the other objects are in motion at the same time. This earth is thought to have three motions when compared with the heavenly bodies. One is the motion of a circuit

round the sun every year; another is rolling over every twenty-four hours; and the third is rocking toward the sun and from it once a year.

Life and motion are closely connected. The blood, which is the life, is in a perpetual motion as long as life is known in man or beast, and even in fish, fowl or insects. I ask, where do we find life without motion? We may say, no where. Then, where does the argument arise, that people must not stir nor exercise, or they will bring on the disease again? We may say, not from the laws of life, but rather from the laws of death. Then, according to the laws that have been explained, if attraction draws substances together, this agrees with that part of the system that humors, flocking together, and settling together in the body, and also, that the matter or gluten of the blood gather into bodies, and thus checks the organs or blood vessels. This is a common cause of disease. If that law, called Repulsion, disperses bodies (and it is mostly effected by heat,) as is believed, according to the laws of nature, this agrees with the system which states that heat drives diseases, as well as those thick substances which are in the blood; therefore it ought to be applied to the whole body, but more particularly to the inside—that is, by steam, which goes to the heart and lights, and hot teas on the stomach. This will drive diseases out towards the surface of the body.

Law of Inertia.—That bodies tend to continue in the state of motion, or of rest, in which they happen to be, so as to render force necessary to change the state, is seen in the following facts. The scientific term used to express this law is *Inertia*—but sometimes the words *obstinacy* and *stubbornness* have been substituted for explanation. When the sails of a ship are first spread to receive the force of the

wind, the vessel does not get in full speed at once, but slowly, as the continued force gradually overcomes the inertia of her mass. If the sails are, after she gets in speed, suddenly taken down, she does not lose her speed at once, but slowly again, as the continued resisting force of the water destroys it. Horses must make a greater effort at first to put a carriage into motion than to maintain the motion afterwards, and a strong effort is required to stop a moving carriage. When a carriage body, hanging with springs, first begins to move, the body of it appears to fall back, and a person within seems to be suddenly thrown against the back cushion. When the carriage stops again the body swings forward. A bad rider on horse-back may be left behind when his horse darts off suddenly, or may be thrown off on one side by the horse starting to the other. A horse at speed stopping suddenly, often sends his rider over his head. A man sitting in a ship's cabin, where the air that is on the outside has no communication, though the ship may move forward ten miles an hour, he scarcely knows whether it is going forward or backward, or at rest. If he throws up a ball it will fall back, just as if he was on the land.—This shows that the ball has relative motion with the ship—and though the man may have all the furniture with him that he could wish, he cannot discover from any thing inside of the cabin that the ship is moving. Thus we may be enclosed inside of this atmosphere, while the earth moves as rapidly as it is said to do, and we be insensible of it. Many more circumstances might be numerated; but these may suffice to show the law of stubbornness.

The author takes the liberty to state, that in addition to the means that have been laid down for the cure of the consumption, he has applied large plasters of No. 6 on the back of a number of persons, and when they have sweat so free that the plasters have slipped off, he has renewed them till the patient got well; and in the course of the last year there has been about 25 professed to be cured of the above disease.

I have observed that among those persons who have purchased my rights, there are some of almost every order; some medical men, some Thompsonians, Indian doctors, (so called) Water doctors, Botanical, &c. as well as a considerable number that never have been doctors at all; each possessing, in a greater or less degree, their habitual prejudices; yet there has been almost universal harmony and friendship among them, though many of them differ widely in their religious and political sentiments. This philanthropic spirit has prevailed to a great extent. But those who have kept nearest the system have generally had the best luck. Some have given the emetic in warm weak lie, instead of cold, and then complained of it not operating right. But I have not heard of any complaint where it has been given right, tho' we should use the second species. And I have not heard of many changes for the better. Here I notice, that when No. 4 is used for cleansing the blood, or enlivening the bowels by repeated portions at any time, let it be of the second species; but if it is given for worms, let it be of the first species.

As this system will likely be deterred by some of the state laws which are unconstitutional, I will remark, that in contending with them, we should always refer to the constitution of the State, or the

United States. One point is, that there shall be no law made that shall destroy the validity of any contract. Another point, that there shall be no law made that a person shall have something for nothing. These are common points; and every officer, when sworn into office, is bound to support the Constitution of the United States. And one point in the Constitution is, to grant patents. Hence they are to support the Patent Law, but they are not bound to support unconstitutional laws.

The general means for cures or common processes, as are laid down in the book, has been applied to women for the rise and obstruction of the menses to advantage, and they have been applied to women in almost every stage of pregnancy without danger.

ERRATAS.

In 3d page 8th line, for *underneath* the pages, read *some* of the pages. In page 38, 35th line, ought to read 1400; & 170 for the consumption. In page 98, 23d line, ought to read, repeat this three nights in succession. In 58th page, 29th line ought to read, the second species of No. 4. In page, 102nd, 8th line, ought to read, the first species of No. 4.

✍ Persons writing to me will please direct their letters to Chillicothe, Ohio.

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Remarks on Females.

THE organization of women differ from men in certain points; but I shall only show the general cause of their disease and manner of cure.

The most principle obstruction that is the cause of disease is the two small canals that convey fluids to the womb. These small canals are easily obstructed. They are sometimes obstructed by cold, but most generally by too much matter in the blood or common cause. When these canals fail to discharge their fluids periodically, this fluid sometimes is thrown back into the other parts of the body, and the general course of all the fluids is deranged; and cold chills or hot flashes, swimming in the head, or strange feelings are felt by the patient; nature makes almost perpetual trials to discharge this substance; it is most apt to be thrown to the discharges of the body, as nature always throws her filth wherever she finds a place of discharge. This substance sometimes gathers up and festers round the womb or rectum; but other times it forms sores on the surface of the body. I have known some that were a long time obstructed, and the disease became a kingsevil, and others whose lungs became affected, and the disease became a consumption. But the most common cases where women are irregular, it forms sores round the womb, or stagnation of blood, and generally, if sores, they are formed on the hip joint, or between the hip and kidney, these sores often settle and obstruct the main arteries in a great measure, and thus disturbs the whole circulation of

blood. When women are plagued with the whites, this fluid is detain'd in the parts too long, or there are sores that matters and runs this substance; when they have discharges of black or dark substance, it is either by a fester or bruise, or a quantity of blood has lodged in the parts and become this color; when it is blood, it is more natural, because there are many small blood vessels that have a close connexion with the parts—this is the reason why they are so apt to flood. Sometimes flooding is produced by large sores in those parts, though all these complaints are most generally from one common cause, as is described in the Book of Remedies, viz:—a stagnation of blood.

It will be found that exercise on foot is of primary importance. I have often remarked that the mistress is often unwell, while the cook and wash-woman are generally hearty; because the former sits and sews, and the like, while the latter is generally on foot, which commonly keeps these vents of the body open.

To young women that have felt some symptoms and never had any discharge, or to young women generally, I will give some advice, and also to their parents. Girls most generally have their first discharge about 14 or 15 years old; and to prepare them for this time, they ought to be set at some kind of business, at twelve years old, that will tend to keep them on foot as much as possible; let them take the free air; and if they become very warm or sweaty, they ought to cool off very gradually; and when they come near their time, give them a tea-spoonful of pulverized brimstone every few days, and drink a small quantity of sassafras tea a few times. If these means do not answer the purpose against they are

15 years old, take them through a regular course of medicine; and every few days give them some brimstone, or Nos. 1 and 2, which will be better, and take them through a regular sweat; and continue the exercise, being dressed warm. There are very few who have been accustomed to work in the corn-field at this age that are unwell. Many parents, when they find their daughters unwell, keep them close in the house, and set them to sewing or knitting, and thus injure their health; instead of setting them to running at the big wheel, or some other lively exercise.

There has been a great number of women that have come to me to be cured, that have been obstructed from three months to four years, and I don't know of one who has pursued the rules right, but have been cured. I have attended several who were expected to die every day, and others who have turned spotted in the face, but they have all been cured; but women that are already affected with a disease of this nature, should take a regular course of medicine, as is laid down in the Book of Remedies, and when there are sores in the department of the womb, make a solution of elder bark, sulphur, a small portion of tobacco, and water blood warm, and use a syringe to throw a small portion up into the womb, two or three times a day till they get better; and after the regular course of medicine, they should take a regular sweat once in two or three days, till well; but when women are already weakened with this or any disease, they are not certain to be regular till they get well otherways; then, when nature gets harnessed with nervis power, it will carry on its own revolutions. While the person is

going thro' the processes above mentioned, after the first 3 days, in which they are to keep their stomachs partly empty. It will be well for them to keep fast once a week, so as not to eat any thing from over night till the turn of the next day; and keep the stomach rather empty, so as not to eat their satisfaction during the whole time, till well; and wearing a large plaster of No. 6 round the loins, and also between the shoulders, will generally be an advantage; and the person should live on a light watery diet during the whole time. But the greatest difficulty or most common one, is with girls about the time they become women. From the time they are twelve years old till they become women, they ought not to sit and sew, or sit at any business any more than could be helped; but allow them a free exercise on foot, as steady as possible: now is the time for them to lay in a store of health that may be good during life. The system should now be made acquainted with the inclemency of the weather, and nature will do her own business. In cases of pregnancy, women ought to live on a light diet, and keep up a steady exercise, which is an advantage; and if they feel symptoms of abortion, they should drink tansey tea—if they have weakly constitutions, they might drink some spikenard root tea, or chew the roots and swallow the substance, or take nerve powders occasionally. The womb falling complaint may often be helped by taking nerve powders. But when these means do not help in a few weeks, the woman should take a regular course of medicine, to cleanse the blood, and afterwards take nerve powders, one or two doses a day, till well. But while a person is going through a regular course of medicine they will be

worse, but this should not discourage them; they should continue the course, and then commence taking nerve powders. But in this last disease, namely, womb falling complaint, it comes from a weakness of the nervous system. The patient should not drink store tea, because it is nervous; they might use weak coffee and nourishing food. Place a large plaster of No. 6 on their backs, as high up as the shoulder blades.

iii FLOODING.

THIS often takes place from sores in the womb department, as the blood vessels and big arteries have a close connexion with the parts. If it takes place from sores, there is generally a sense of it felt, that is a soreness round the parts. When it takes place from a sore, or any vessel being broken in the parts, we should place a large plaster of No. 6 over the back as high as the shoulder blades, and one over the sore place: keep the patient's body in a level position and cool till it abates: giving large doses of nerve powders; & in the intermission between the natural courses, take them through a regular course of medicine, continue large plasters of No. 6, and inject up into the womb a solution made of the 4th species of No. 2, by putting the powders in warm water: this species is mentioned in the Book of Remedies, in the last process for the consumption; and after the regular course, give one or two tea spoonful of nerve powder a day. Sometimes it takes place when there is no sore; when the blood is very thin it leaks

out at the natural discharges of the body, or other parts, because these blood vessels have a close connection with the parts.

Other times, the mouths of the bleeding vessels are opened by the child when pregnant, and causes a flooding. But it is worthy of notice, that when people are affected with a common cause, the three parts of the blood gits separate in the body, and the thin part runs off in this way; yet if the blood was rightly mixed it would be very thick. But in all cases of flooding the patient's body should be kept cool and laid in a level position, and give them several doses of nerve powders; and if it continues, tie garters round the limbs till it abates. If it comes from a common cause, or a stagnation of blood, they will have the symptoms of a common cause; if so, between the natural courses, or at the time when it is finally abated, take the patient through a regular course of medicine, and place a large plaster of No. 6 over the back, and give No. 5 in the time of flooding; and have them dress warm and take as much exercise as possible. But that species of flooding that comes on women in pregnancy, that is, while the fetus or unborn child crowds the parts, they open the mouths of the bleeding vessels, and while those vessels are on the stretch, and the blood thin or stagnated, they commence bleeding; if this is the case, and it cannot be stopped by some of the means that have been mentioned—as those means seldom have a bad effect on pregnant women, or any others—then we may know that the vessels are kept open or stretched more than they can bear. It will be necessary, in this case to deliver the woman as soon as possible.

I shall now make mention of Dr. Edward Rigby, of Norwich in Europe. He gives a narrative of upwards of forty cases of profuse flooding in pregnancy, and by delivering the women there lives were principally saved. I shall make a few explanatory remarks on this subject.

No circumstance that attends parturition or pregnancy exposes women to so much danger as profuse Hemorrhages or flooding. Towards the latter end of pregnancy, and more especially in the time of labor, the art of midwifery is in no instance more at a loss for means to relieve the patient. The treatment of floodings that come on before the uterus has acquired any considerable size, must be considered not dangerous, if they use such medicine and management as have been mentioned, it will commonly abate, and the women go on to her full time. If it should continue, the small child and secondaries will be apt to pass off, and then the uterus will be apt to contract, and thereby close the mouths of the bleeding vessels. The med. viv. has nothing to do in these cases. But that flooding that precedes the delivery of the full grown child, when the uterus has arrived at its greatest stretch and the vessels have acquired their greatest magnitude, must be ever highly dangerous; being more profuse and more difficult to suppress, in proportion to the increased size of the vessels, inasmuch that the number of instances in which they have unhappily proved fatal, is very considerable. I will just name the case and give a few explanatory remarks, and leave it to the judgment of the practitioner.

Dr. Rigby generally introduced his hand into the uterus, if possible, and also into the mouth of the

womb and turned the child, and delivered the woman as soon as possible; and after clearing her, the parts would generally contract, and stop the mouths of the bleeding vessels. But before he could deliver women, he broke the membrane generally with his nail or some instrument; though it is not safe to break the membrane or the part that surrounds the child, until the mouth of the womb is sufficiently enlarged, that the child can pass, as these are some of nature's means to enlarge the parts. But if the parts are sufficiently opened, so that the head can pass, it is likely that the child could be extricated or the woman delivered. Dr. R. thinks that it is the best chance, after some other means have been tried, that if the parts are sufficiently enlarged it can be done at any time during pregnancy. But as it is a branch of business I have practised but very little, I shall therefore leave it to the judgment of the practitioner. :

The next thing I shall mention, is women when on the decline of life. Their menstrual discharges commence at 14 and ceases about 47. In the cessation of this discharge, nature seems to be combined with this surplus fluid; it sometimes produces sores over the body, and others it effects inwardly. But if the women generally would live on light diet from the time they are 44, keep fast once a week from over night till the turn of the next day, and take a dose of Nos. 1 and 2 once a week, it would have a good effect; but any time when women are in the decline of life and feel unwell, let them take two or

three doses of Nos. 1 and 2, and take a regular sweat once in two or three days, and wear a large plaster of No. 6 round the loins; it generally will relieve them: exercise on foot is also good, and to wear flannel next the skin is good. If they baffle the disease till they are fifty-five, they generally are more healthy than ever. But if during the time from 45 to 55, the woman has sores outside or in, or any other convulsions of the blood, let them take a regular course of medicine, and regulate their diet as usual; it generally will cure.

Receipt to Make No. 7.

Take 1 quart of alcohol, 1 gill of ether, 40 drops of cinnamon oil, 40 drops of laudanum, 40 drops of aniseed oil colored with saunders, a quarter of an ounce of camphor gum—mix these well together.—This medicine will lay the stomach and stimulate.

Hot Props, or No. 8.

One quart of alcohol, though brandy may do, 1 gill of ether, 1-1 pound of seneca snake-root well powdered, half an ounce of cayenne pepper—these should be mixed together and kept in a clean place three days for use. This medicine will stimulate the system and cause perspiration in stagnations of blood.

Every species of No. 2 can be placed in brandy and given to advantage, instead of giving them as has been laid down. Every species of Nos. 4 and 5 may be given in spirits, when people do not like to take them otherwise. Each species of No. 3 may be mixed with strong ley and bottled up for use; and when used mix cold water with it to make it weak enough to take.

Midwifery.

THERE may be said to be three stages in the process of natural labor. The first includes all the circumstances and changes which take place from the commencement of the pains to the complete dilatation or extension of the parts; the breaking of the membrane that contains the unborn child, and the discharge of the water. The second includes those which occur from the time of the opening of the os uteri or parts to the expulsion of the child. The third includes all the circumstances which relate to the separation and exclusion of the placenta or after-birth. But to treat of each of these stages more particularly and in order—

The womb is not always found in the same central position, nor does it always dilate in the same length of time. The first part of the dilatation and enlargement of the parts is generally made very slowly; but when the membranes containing the water begin to insinuate themselves, they act like a wedge, and then the operation proceeds much more rapidly. It cannot well be told with certainty how long time will be required in any case for the complete dilatation of the parts yet some conjecture may be made. If, for example, after the pains have continued three hours, the mouth of the womb should be enlarged to the size of one inch; then two hours will be required for enlarging it to two inches; and three more hours will be required for a complete enlargement: making in all, eight hours. This calculation supposes the labor to go on regularly and with equal strength. But the mouth of the womb and general channel sometimes remains for hours in the same state; and

yet, when it begins to enlarge, the complete enlargement is soon perfected. Again, in some cases the enlargement proceeds on regularly for a while, and then is suspended for many hours, and afterwards returns with great vigor. With first children, this is commonly tedious and very painful; some considerable judgment is therefore necessary on the part of the midwife, for supporting the patient and encouraging the suffering woman. As the labor proceeds, the pains become more frequent and forcible; and if the dilation should take place with difficulty, there will sometimes be a sickness at the stomach, and if so, this is a favorable symptom, for it commonly has a tendency to relax the system.

At length, after a greater or lesser number of hours, as the case may be, the dilation is effected. But let it be carefully observed, that artificial aid is not to be offered during this part of the process: it may indeed be well to encourage the woman and inspire her with confidence—but be assured that all manual interposition will retard the progress, except feeling round the bowels and placing the head of the child in a right position to come into the world. But if the womb is not in a central position, so that the mouth of it is not towards the channel that leads to the world, it should be placed in a central position—though the patient or by-standers be ever so scared or ignorant—pain on the one hand and ignorance on the other. But the midwives must be firm in the discharge of their duty. Care must be taken not to break the membrane. Should an examination be deemed necessary, when the uterus is fully dilated, the membrane is usually broken by the force of the pains, if this should be the case, they will be

protruded outwards in the form of a bag and therefore of no further use; if the labor has not been disturbed, the child is commonly born speedily, after the natural raptors of the birth be delayed; after this event takes place it will be a very proper time to make a careful examination of the state of things.— Here I may remark, that touching the parts too frequently is injurious. The juices furnished by nature for moistening the parts, must be improperly exhausted by repeated application of the hand: it is right not to take women in hand too soon, till nature is fully ripe for the process. It happens commonly, that women taken at surprise, have better times than when aided by a good midwife, because the natural juices is not wiped away: nature is generally competent to the task appointed her of God, and the only circumstances which can make it necessary to call in a midwife at all, are, the possibility of irregularity, and the convenience of having dexterity in the management of the after-birth, dressing the child, &c.

This brings me to the second stage.

The second stage of natural labor, includes all the circumstances attending the descent of the child through the pelvis, the dilatation of the external parts, and the final expulsion of the child. In general, it will follow, that the further the labor is advanced before the discharge of the water, the more speedily and safely will the second stage be accomplished. As the head of the child passes through the pelvis, it undergoes various changes of position, by which it is adapted to the form of each of the passages, and that more or less readily, according to the size of the head, strength of pains, &c.; and

whether these changes are produced quickly or in a tedious manner, whether in one or many hours, it can by no means be proper to interfere, for the powers of the constitution will produce their proper effects, with less injury and more propriety than the most dexterous midwife. When the head begins to press upon the external parts, at first every pain may be suffered to have its full and natural effect, but when a part of the head is fully exposed, and the fore part of the perinaeum is on the stretch, it is necessary to use some precaution to prevent its being torn; and the more expeditious the labor, the more is the caution necessary. Some have thought, that if the external parts be very ridged, they should be frequently annointed with some kind of ointment.—Nothing can equal the natural juices, but if from any cause the parts become heated, dry flannels wrung out of warm water should be applied for some time, and afterwards some very mild ointment might not be amiss. Women with first children are most subject to inconvenience and difficulty in these respects. To prevent any injury from befalling the external parts, the only safe and effectual plan is to retard for a certain time the passage of the head through them; therefore, instead of encouraging the patient, at this time, to use her utmost exertion to hasten the birth, she should be convinced of its impropriety, and be discouraged from using any voluntary exertion. If she cannot be "regulated" according to your wishes, her efforts must be counteracted by some external resistance. This may be performed by placing the finger and thumb of the right hand upon the head of the child during the time of a pain, or placing the balls of one or both thumbs on the thin

edge of the perinum. With first children, if there be great exertions and much danger of damage, the right hand may be used as before, and the palm of the left hand wound round with a soft cloth may be applied over the whole perinum, where it must be firmly continued during the violence of the pains.—It is proper to proceed in this way till the parts are sufficiently dilated; then the head may be permitted to slide through them in the slowest and gentlest manner, paying the strictest attention, till it is cleared of the perinum. If there should be any delay or difficulty when the perinum slides over the face, the fore finger of the right hand may be passed under its edge, by which it may be cleared of the mouth and chin, before the support given by the left hand may be withdrawn. This assistance should be applied in a proper direction and with uniformity—the danger of injury to the external parts will be increased by irregular pressure—the head being expelled, it is commonly deemed necessary to extricate the body of the child without delay; but experience has now taught that there is no danger, and that it is far safer for the mother and child to wait for the return of the pains; and when the shoulders of the child begin to advance, and the external parts are again brought to the stretch, the same support should be given to the perinum as before; the child should then be conducted in a proper direction, so as to keep its weight from resting too heavily on the perinum. Two or three pains are sometimes necessary for the expulsion of the shoulders, after the head is born. The child should be placed in such a situation that the external air may have free access to its mouth, but let the head be covered. Having

taken the proper care of the mother, it will be necessary to proceed to the third and last part of the operation.

The third stage of natural labor:—

There is a proper time for dividing the funis or umbilical cord. Before the child breathes and cries, a motion of the arteries of the cord may be felt beating like the pulse; but after it has breathed and cried, this pulsation or motion ceases, and the string becomes quite relaxed and soft. These circumstances ought to take place before the umbilical cord is divided. Ten, fifteen, and sometimes twenty minutes are required for the complete relaxation of the navel string—then let it be tied in two places and divided between them. Soon after the birth of the child the midwife should apply her hand upon the abdomen of the mother, to determine whether there be another child, and whether the womb contracts in a manner favorable to the separation and removal of the cake. Most women are extremely uneasy till the placenta is removed, and suppose the sooner it is accomplished the better; but this uneasiness is unnecessary, and all hurry is improper. After the birth of the child, let the first attention be paid to the mother—tranquility should be restored to her mind, and the hurried circulation of the blood should be calmed; she should be recovered from her fatigue, and her natural state regained as soon as possible: with this design, let her be kept quiet, affording her at the same time some suitable refreshment. In the course of ten, fifteen or twenty minutes the pains will return for the purpose of expelling the placenta; and it will generally be expelled without any kind of artificial aid, which should never be employ-

ed where it can be avoided. But if it descends too slowly, the midwife may take hold of the cord, and by pulling it in a gentle manner and in a proper direction, may afford some assistance, and this should be done only in time of a pain. After the placenta is brought down into the vagina, whether by the natural pains or with the artificial aid as above, it must be suffered to remain there till excluded by the pains—this may prevent a dangerous flooding. If an hour be requisite for the exclusion after it enters vagina, no assistance ought to be offered; but after that time, it may again be gently pulled in the time of the pains. No objections should be raised to this plan, from any supposed advantage to be derived to the child from laying the cake upon its belly upon hot embers, in hot wine, or the like: all this is perfect folly.

Let it then be a settled point, that hurry is improper, either in dividing the string or removing the cake. Haste, in the first place, may destroy the child; in the last, must injure the mother in a greater or less degree. If the ill effects be not immediately perceived, she will at length be sensible of the injury when her health gradually declines.

The conclusion to be drawn from the foregoing is, that parturition is a natural process of the constitution, which needs no assistance; and when it is natural, it should always be suffered to have its own course, without interruption.

If the process should go on too slow, you can use some of the Nos. 7 and 8, to stimulate the system, at any time when there is no danger of flooding.







